02-8906-41-PA
REV. NO. 0

FINAL DRAFT
PRELIMINARY ASSESSMENT
L.A. DREYFUS COMPANY
EDISON, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8906-41
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 30, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

RICHARD L. FEINBERG
PROJECT MANAGER

MAGDA TRUJILLO
SITE MANAGER

REVIEWED/APPROVED BY:

RONALD M. NAMAN
FIT OFFICE MANAGER

235693

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PART I: SITE INFORMATION

1. **Site Name/Alias** L.A. Dreyfus Company

   Street 3775 Park Avenue

   City Edison **State** New Jersey **Zip** 08817

2. **County** Middlesex **County Code** 023 **Cong. Dist.** 6

3. **EPA ID No.** NJD002150993

4. **Latitude** 40° 34' 27" **Longitude** 74° 23' 09"

   USGS Quad. Plainfield, NJ

5. **Owner** L.A. Dreyfus Company **Tel. No.** (201) 549-1600

   Street P.O. Box 500

   City South Plainfield **State** New Jersey **Zip** 07080

6. **Operator** Same as owner **Tel. No.** _____

   Street _____

   City _____ **State** _____ **Zip** _____

7. **Type of Ownership**

   ☒ Private ☐ Federal ☐ State
   ☐ County ☐ Municipal ☐ Unknown ☐ Other _____

8. **Owner/Operator Notification on File**

   ☒ RCRA 3001 **Date** 8/18/80 ☐ CERCLA 103c **Date** _____
   ☐ None ☐ Unknown

9. **Permit Information**

Permit	Permit No.	Date Issued	Expiration Date	Comments
NJDES	NJ0001210	Unknown	Unknown	Discharges to surface water

10. **Site Status**

    ☒ Active ☐ Inactive ☐ Unknown

11. **Years of Operation** 9/1/63* to Present

    * An inspection report dated on 4/6/86 stated the facility started operations in 1948.

12. Identify the types of waste units (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Management Areas

Waste Unit No.	Waste Unit Type	Facility Name for Unit
1	55-Gallon Drums	Drum Storage Area

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

No known miscellaneous spills, dumping, etc. were observed on site.

13. Information available from

Contact Amy Brochu Agency U.S. EPA Tel. No. (201) 906-6802

Preparer Magda Trujillo Agency NUS Corp. Region 2 FIT Date 08/22/89

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 1 - 55-Gallon Drums Drum Storage Area

1. Identify the RCRA status and permit history, if applicable, and the age of the waste unit.

L.A. Dreyfus Company filed a Notification of Hazardous Waste Activity on August 18, 1980, and a Hazardous Waste Permit Application as a treatment, storage, or disposal (TSD) facility for the storage of hazardous waste containers on November 19, 1980. The facility requested to be delisted as a TSD facility, on August 5, 1983, and was reclassified as a generator only. A RCRA generator inspection on November 10, 1981 indicated that hazardous wastes were stored on site for 2 years. Presently, there is no information available that indicates the age of the waste unit.

2. Describe the location of the waste unit and identify clearly on the site map.

The location of the drum storage area is not documented in available information. However, from the off-site reconnaissance it can be assumed that the waste unit is inside the facility, since no waste units were observed on the property.

3. Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.

According to the hazardous waste permit application the capacity of the waste unit is 6,160 gallons. The highest accumulation of wastes found on-site at any one period was forty-nine 55-gallon drums, which is approximately 2,450 gallons. Presently, the quantity of waste in the waste unit is unknown.

4. Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.

The physical state of the waste is liquid.

5. Identify specific hazardous substance(s) known or suspected to be present in the waste unit.

The hazardous waste permit application and hazardous waste manifest indicate that the following hazardous wastes were on site; halogenated and nonhalogenated solvents, methyl alcohol, tetrahydrofuran, toluene, chloroform, xylene, arsenic, isopropanol, mineral spirits, perchloroethylene, hexane, and waste oil (non-PCB bearing).

6. Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.

A RCRA inspection conducted on April 6, 1986 indicates that the facility stored all hazardous wastes in an explosion proof paint shed, which has a 24-hour surveillance camera and containment for spills. The drums inside the shed are grounded.

Ref. Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

PART III HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

   There is no likelihood of a release of contaminants to the groundwater since the waste unit was located in a shed and it has containment for spills. Also, the drums have been reported to be in good condition.

   Ref. Nos. 1, 4, 9, 10, 11

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

   The Passaic Formation, formerly known as the Brunswick Formation serves as the aquifer of concern. The formation is over 5,000 feet thick and is composed of red shale interbedded with siltstone and sandstone. In the vicinity of the site, the Passaic Formation is at an estimated depth of 20 to 50 feet and is covered by Pleistocene glacial deposits of stratified drift consisting of gravel and sand. The stratified drift is hydraulically connected to the Passaic Formation. Water is stored and transmitted through fractures in the shale and the interbedded sandstone; and to a lesser extent in the siltstone layers. The groundwater flow can be in any direction because of the cracks in the rocks, which intersect one another at many different angles. The predominant groundwater flow in the area of study is southeast. The depth to water table is approximately less than 20 feet. The Passaic Formation has an estimated permeability of 10^{-5} to 10^{-7} cm/sec.

   Ref. Nos. 13, pp. 31, 35, 36, and 37; 14, pp. 18, 19, 20, 21, 140, 141, 143; 15, 16, 17, 18, pp. 2 and A-31; 20, 38, 39, 40

3. **Is a designated sole source aquifer within 3 miles of the site?**

   The Passaic Formation in Edison, N.J. is not a sole source aquifer.

   Ref. No. 23

4. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

   Since the lowest point of waste storage is unknown, it is assumed to be ground level. The depth from the ground surface to the water table is approximately less than 20 feet.

   Ref. Nos. 1, 16, 39, 40

5. **What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

   The intervening stratum between the ground surface and the aquifer of concern consists of reddish brown sticky clay. However, reports indicate that this layer may not extend 3 miles from the site. Therefore, the least permeable continuous intervening stratum is glacial tills and stratified drift, which have an estimated permeability of 10^{-5} to 10^{-7} cm/sec.

   Ref. Nos. 14, pp. 19; 15, 18, 38, 39, 40

6. **What is the net precipitation for the area?**

The net precipitation is 13 inches. (46 - 33 = 13).

Ref. No. 15

7. **Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).**

There are at least 20 public supply wells, 5 domestic supply wells, and 6 industrial-use wells that lie within 3 miles of the site.

Ref. Nos. 16, 17, 22, 24, 25

8. **What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?**

Distance Approximately 9,500 feet **Depth** Approximately 501 feet

It is possible that other usable wells are located closer to the site.

Ref. Nos. 16, 17, 20, 22

9. **Identify the population served by the aquifer of concern within a 3-mile radius of the site.**

Based on available data obtained from Middlesex Water Company, on October 21, 1985; the population served from wells within a 3-mile radius of the site is approximately 196,900 people.

Ref. No. 24

SURFACE WATER ROUTE

10. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.**

There is a minimal potential for a release of contaminants to surface water; data obtained from the NUS Corp. FIT 2 off-site reconnaissance shows that no contaminants were coming off the site. Containment is assumed to be adequate, since the unit is presumed to be within a shed inside the facility. No containment problems associated with the unit were stated in the background information.

Ref. Nos. 1, 4, 9, 10, 11

11. **Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

An unnamed tributary that leads into Bound Brook is the nearest downslope surface water. Possible surface drainage patterns from the site are to the south and west according to the United States Geological Survey (USGS) topographic map.

Ref. Nos. 1, 17

12. **What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)**

    There is not sufficient information available to determine facility slope; however, based on observations from NUS Corp. FIT 2 off-site reconnaissance on July 19, 1989, and the United States Geological Survey (USGS) topographic map of Plainfield, N.J., the slope is estimated to be less than one percent.

    Ref. Nos. 1, 17

13. **What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)**

    Based on the information obtained from the NUS Corp. FIT 2 off-site reconnaissance and the United States Geological Survey (USGS) topographic map of Plainfield, N.J., the slope of the intervening terrain is estimated to be less than three percent.

    Ref. Nos. 1, 17

14. **What is the 1-year 24-hour rainfall?**

    The 1-year 24-hour rainfall is 2.7 inches.

    Ref. No. 15

15. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

    An unnamed tributary that leads into Bound Brook, is approximately 850 feet to the south of the site location.

    Ref. No. 17

16. **Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).**

    Surface waters within 3 miles downstream of the site are used for recreational purposes.

    Ref. Nos. 17, 20, 27

17. **Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.**

    There are freshwater wetlands greater than 5 acres in area, within 2 miles downstream of the site.

    Ref. Nos. 17, 28

18. **Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.**

The Peregrine Falcon is a federally listed endangered species that occurs year round in Middlesex County. However, it is not known whether this species exists within 2 miles of the site.

Ref. Nos. 29, 30

19. **What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?**

A large expansion of freshwater wetlands is located approximately 5,500 feet downstream of the site.

Ref. Nos. 17, 18, 28

20. **Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).**

There are no surface water intakes within 3 miles downstream of the site.

Ref. Nos. 17, 22

21. **What is the state water quality classification of the water body of concern?**

The state water quality classification of Bound Brook is FW2-NT.

Ref. No. 31

22. **Describe any apparent biota contamination that is attributable to the site.**

On July 19, 1989, NUS Corp. FIT 2 conducted an off-site reconnaissance and no stressed vegetation or dead animals were observed.

Ref. No. 1

AIR ROUTE

23. **Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

Presently, the potential for a release of contaminants to air is unknown. However, in the past, hazardous wastes presumably were contained properly in drums, within an explosion proof shed, inside the facility. Inspections conducted periodically indicated that the waste unit was properly maintained.

Ref. Nos. 1, 4, 9, 10, 11

24. **What is the population within a 4-mile radius of the site?**

The population within a 4-mile radius of the site is approximately 169,000 people.

Ref. No. 26

FIRE AND EXPLOSION

25. Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.

Presently, the potential for a fire or an explosion to occur is unknown. There are ignitable and reactive materials stored on site. A NJDEP inspection conducted on April 6, 1986 indicated that there was a slight potential for a fire or explosion to occur; however wastes were contained in an explosion proof shed.

Ref. Nos. 1, 4, 10

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

The estimated population within a 2-mile radius of the site is 25,900 people.

Ref. No. 26

DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

The site has no fencing provided; however, there is a little potential for direct contact with hazardous substances stored onsite, because the waste unit appears to be inside and thus adequate control for unauthorized personnel entry is assumed to be provided.

Ref. Nos. 1, 4, 9, 10, 11

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

No known contaminated area has been determined.

Ref. Nos. 1, 4, 9, 10, 11

29. What is the population within a 1-mile radius of the site?

The population within a 1-mile radius of the site is approximately 6,600 people.

Ref. Nos. 26

PART IV: SITE SUMMARY AND RECOMMENDATIONS

L.A. Dreyfus Company reported its operations beginning on September 1, 1963, on its U.S. EPA Hazardous Waste Permit Application; however, according to a RCRA inspection conducted on April 6, 1986, the company reported that operations began in 1948. L.A. Dreyfus is an active 46 acre facility situated east of Park Avenue and south of the Conrail tracks, in Edison, Middlesex County, New Jersey. The site is surrounded by commercial and residential areas.

L.A. Dreyfus is a private company, which manufactures chewing gum base from natural and synthetic food grade raw materials. Hazardous wastes are generated from the activity of decreasing gum base plates. Waste chemicals and solvents are generated when gumbases are broken down in lab experiments. Waste lubricating oils are generated by the machine shop on site. As a food manufacturing plant, generation of hazardous wastes is minimal. Presently, no available information indicates the quantity of the hazardous wastes on-site. The facility filed its Notification of Hazardous Waste Activity on August 18, 1980, and the permit to operate as a Treatment, Storage, and Disposal (TSD) facility on November 19, 1980. However, they requested to be delisted as a TSD facility on August 5, 1983, and were reclassified to a generator only. The most recent inspection conducted on April 6, 1986, indicated that the L.A. Dreyfus Company had paperwork violations and the hazardous waste management program was very good.

The waste unit reportedly possesses the proper hazardous waste containment, which is an explosion proof shed. There is no known evidence that indicates a potential for direct contact, release to the environment, or threat to public health. Therefore, **NO FURTHER REMEDIAL ACTION PLANNED** is recommended for this site.

ATTACHMENT 1

L.A. DREYFUS COMPANY
EDISON, NEW JERSEY

CONTENTS

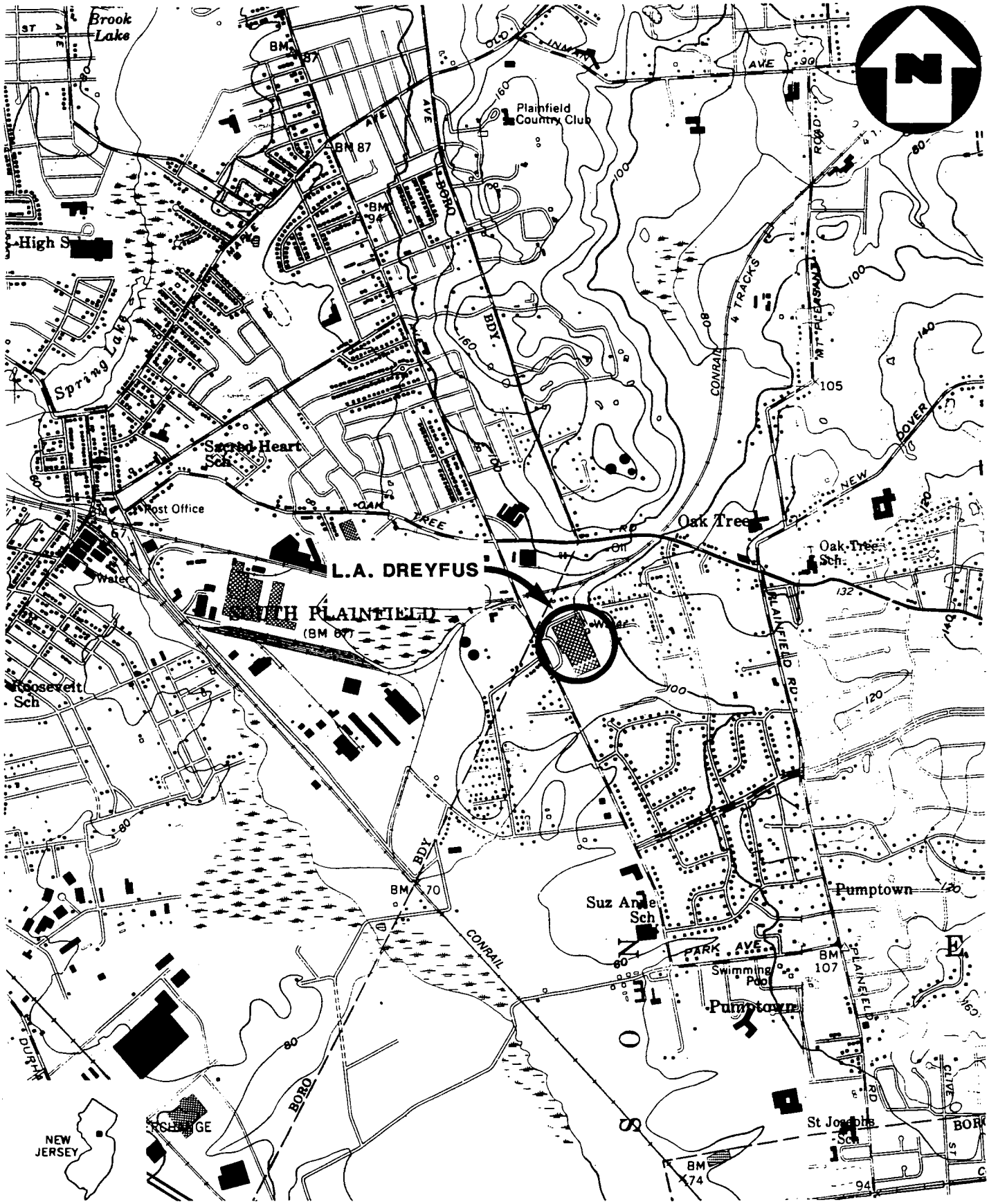


FIGURE 1

SITE LOCATION MAP

L.A. DREYFUS, EDISON, N.J.

SCALE: 1"= 2000'

NUS CORPORATION

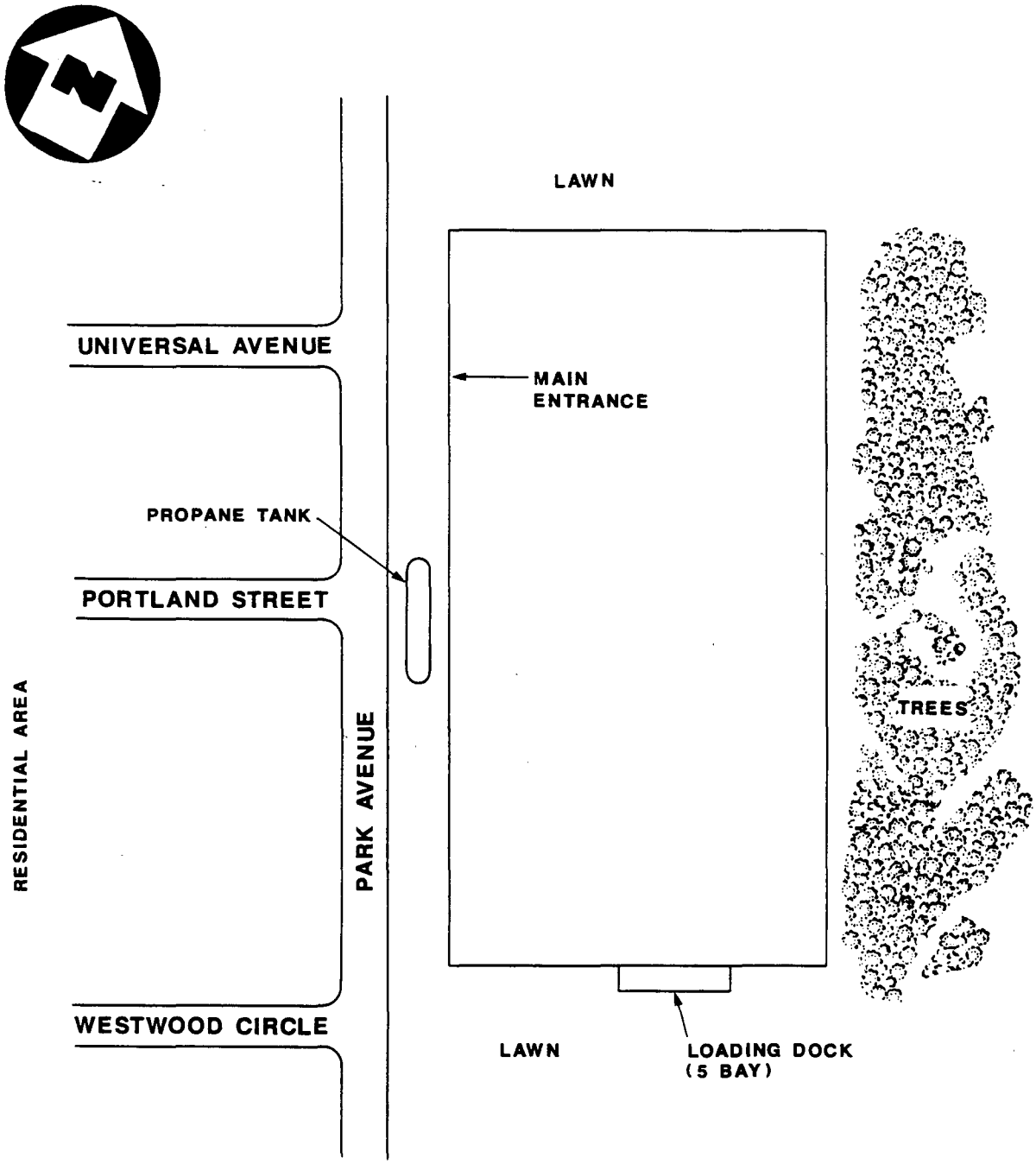


FIGURE 2

SITE MAP

L.A. DREYFUS CO., EDISON, N.J.

NOT TO SCALE

NUS CORPORATION

EXHIBIT A

PHOTOGRAPH LOG

L.A. DREYFUS COMPANY
EDISON, NEW JERSEY

OFF-SITE RECONNAISSANCE: JULY 19, 1989

L.A. DREYFUS COMPANY
EDISON, NEW JERSEY
JULY 19, 1989

PHOTOGRAPH INDEX

Photo Number	Description	Time
1P-12	Looking at south side of the facility.	1342
1P-13	Looking at southwest corner of the facility.	1343
1P-14	Main entrance, looking at northeast of the facility.	1345

L.A. DREYFUS COMPANY

1P-12 July 19, 1989 1342
Looking at south side of the facility.

1P-13 July 19, 1989 1343
Looking at southeast side of the facility.

L.A. DREYFUS COMPANY
EDISON, NEW JERSEY

1P-14 July 19, 1989 1345
Main entrance, looking at northeast of facility.

ATTACHMENT 2

REFERENCES

1. Off-site reconnaissance information reporting form, L.A. Dreyfus Company, TDD No. 02-8906-41, NUS Corp. Region 2 FIT, Edison, New Jersey, July 19, 1989.

2. Letter from Chester A. Czaplicki, Production Manager, L.A. Dreyfus Company, to Richard Baker, United States Environmental Protection Agency (U.S. EPA) Region II, December 7, 1982.

3. New Jersey Department of Environmental Protection (NJDEP), Hazardous Waste Manifest, April 8, 1983.

4. RCRA Inspection Form completed by Wolf Skacel, NJDEP inspector, April 6, 1986.

5. NJDEP/Hazardous Waste Manifest, October 21, 1983.

6. EPA Form 8700-12 (6-80), Notification of Hazardous Waste Activity, July 3, 1980.

7. EPA Form 3510-3 (6-80), Hazardous Waste Permit Application, November 18, 1980.

8. EPA Form 3510-1(6-80), General Information, November 17, 1980.

9. RCRA Inspection Form completed by Tom Downey, NJDEP Inspector, August 5, 1981.

10. RCRA Treatment, Storage and Disposal Facility Inspection Form for TSD Facilities only, Bob Dante, NJDEP Inspector, November 10, 1981.

11. RCRA Generator Inspection Form, Bob Dante, NJDEP Inspector, November 10, 1981.

12. Letter from Frank Coolick, Chief, NJDEP/Bureau of Hazardous Waste Engineering, to Chester A. Czaplicki, Production Manager, L.A. Dreyfus Company, August 5, 1983.

13. Froelich, A.J. and G.R. Robinson, Jr. Studies of the Early Mesozoic Basins of the Eastern United States, U.S. Geological Survey Bulletin 1776, 1988.

14. Barksdale, H.C., M.E. Johnson, R.C. Baker, E.J. Schaefer, and G.D. De Buchananne. The Ground-Water Supplies of Middlesex County, State of New Jersey, Water Policy Commission, 1943.

15. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.

16. U.S. Department of the Interior Geological Survey Water Resources Division, Groundwater Site Inventory Database for Middlesex County, N.J., sorted by U.S.G.S. January 9, 1989 and February 20, 1986.

17. Three-Mile Vicinity Map based on U.S. Department of the Interior, Geological Survey Topographic Maps, 7.5 minute series, "Perth Amboy Quadrangle, NJ", 1956, revised 1981, "Plainfield Quadrangle, NJ", 1955, revised 1981.

18. Geraghty and Miller, Inc., Middlesex County 208 Area-Wide Waste Treatment Management Planning Task 8 - Ground-Water Analysis, November 1976.

19. Telecon Note: Conversation between City Engineer, Middlesex Water Company, and Magda Trujillo, NUS Corp., July 18, 1989

REFERENCES (Cont'd)

20. Telecon Note: Conversation between Bob Kreilick, Somerville Well Drilling Co., and Richard Pagano, NUS Corp., June 8, 1989.

21. Telecon Note: Conversation between Donna Yukob, Elizabethtown Water Company, and Richard Pagano, NUS Corp., June 8, 1989.

22. NJDEP/Bureau of Geology and Topography, Bulletin 73, 1974, Water Supply Overlay, Sheet 25 and 26.

23. New Jersey Coastal Plain Aquifer System, New Jersey Sole Source Aquifer Final Determination, Federal Register, Vol. 53, No. 122, June 23, 1988.

24. Letter from J. Richard Tompkins, President, Middlesex Water Company, to David J. Grupp, NUS Corp., Region 2 FIT, October 21, 1985.

25. Telecon Note: Conversation between City Engineer, Edison Township Water Department, and D. Lamond, NUS Corp., June 19, 1989.

26. General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.

27. Telecon Note: Conversation between Bob Stewart,NJDEP Fish, Game, and Wildlife, and David Grupp, NUS Corp., November 14, 1985.

28. U.S. Department of the Interior, Fish and Wildlife Service, Atlas of National Wetlands Inventory Maps for New Jersey, 1984.

29. Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, April 10, 1987.

30. NJDEP/Division of Fish, Game, and Wildlife, Endangered and Threatened Wildlife in Middlesex County, New Jersey, July 20, 1987.

31. NJDEP/Division of Water Resources, NJAC 7.9-41 et.seq., Surface Water Quality Standards, May, 1985.

32. NJDEP/Division of Waste Management, Notice of Violation, March 27, 1986.

33. NJDEP/Division of Waste Management, Inspection Report, March 27, 1986.

34. Letter from Philip J. Thomas, Environmental Control Chemist, L.A. Dreyfus Company, to Wolf Skacel, NJDEP, April 7, 1986.

35. NJDEP/Division of Waste Management, Notice of Civil Administrative Penalty Assessment, September 10, 1986.

36. Letter from David J. Shotwell, Chief, NJDEP/Bureau of Compliance and Enforcement to Robert Devansky, L.A. Dreyfus Company, June 7, 1983.

REFERENCES (Cont'd)

37. Letter from Chester A. Czaplicki, Production Manager, L.A. Dreyfus Company, to Frank Coolick, Chief, Bureau of Hazardous Waste Engineering, NJDEP, March 2, 1983.

38. Department of Conservation and Economic Development, Division of Water Policy and Supply, Well Record, July 25, 1963.

39. Phase I Report, Site Groundwater Protection Plan for the Chevron Chemical Company Facilities at South Plainfield, New Jersey, May 1980, Job No. 03818-049-10.

40. Phase II Study Report, Chevron Ortho Facility, South Plainfield, New Jersey, January 1982, Job. No. 3810-062-10.

REFERENCE NO. 1

PRELIMINARY ASSESSMENT
OFF SITE RECONNAISSANCE
INFORMATION REPORTING FORM

Date: July 18th, 1989

Site Name: LA Dreyfus Company TDD: 02-8906-41-W1

Site Address: 3775 Park Ave.
Street, Box, etc.

Edison
Town

Middlesex
County

New Jersey
State

NUS Personnel:	Name	Discipline
	J. FROST	ENV. SCIENCE
	M. TRUJILLO	MICROBIOLOGY

Weather Conditions (clear, cloudy, rain, snow, etc.):
PARTLY SUNNY, HOT, HUMID

Estimated wind direction and wind speed: SE 5 mph

Estimated temperature: 85

Signature: James A. Frost Date: 7/19/89

Countersigned: Magda Trujillo Date: 7/19/89

PRELIMINARY ASSESSMENT

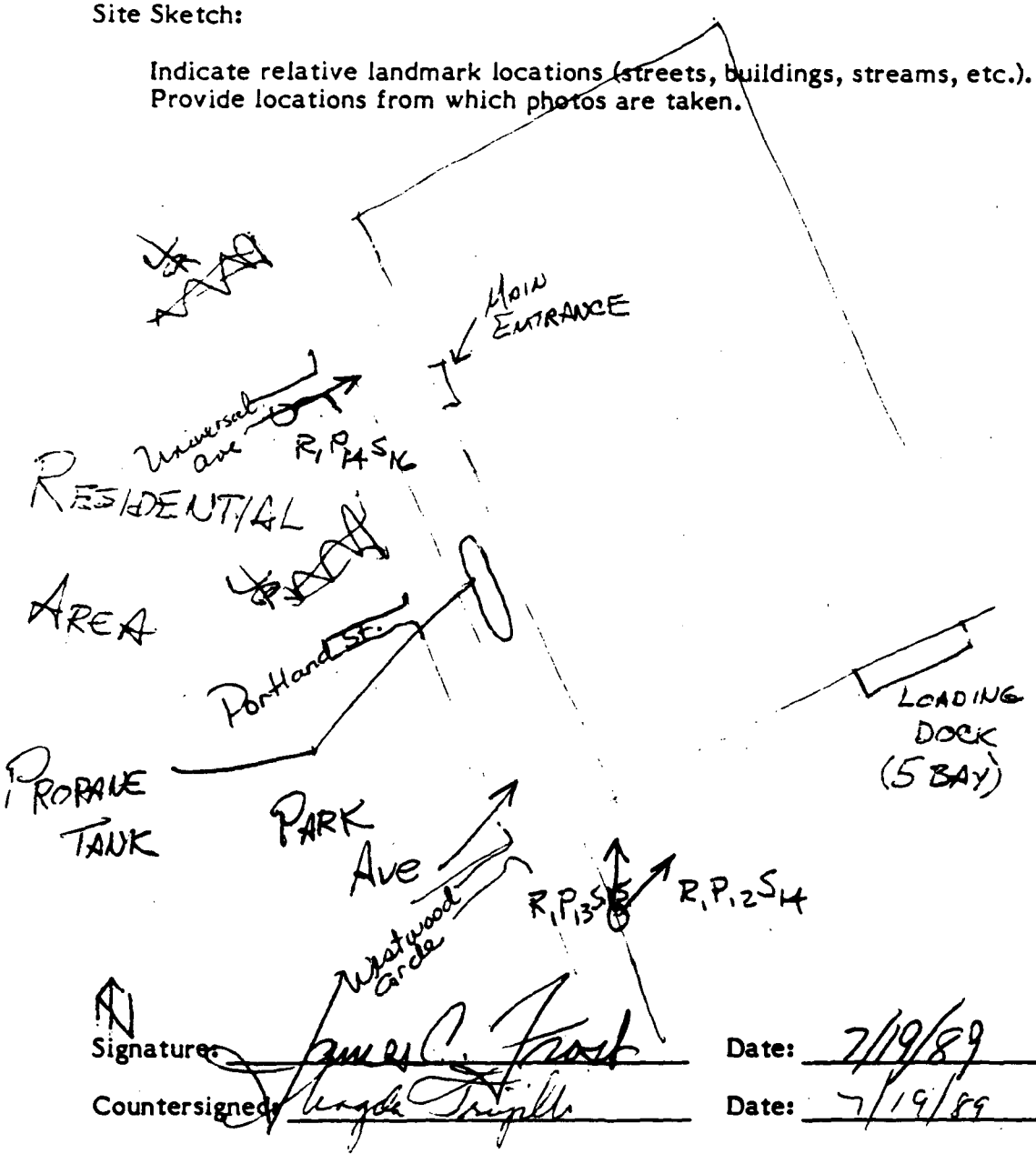
INFORMATION REPORTING FORM

Date: 7/19/89

Site Name: LA DREYFUS TDD: 09-8906-41

Site Sketch:

Indicate relative landmark locations (streets, buildings, streams, etc.). Provide locations from which photos are taken.



Signature: James C. Frank Date: 7/19/89

Countersigned: Angela Griffith Date: 7/19/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 7/19/89

Site Name: L A DREYFUS TDD: 03-8906-41

Notes (Periodically indicate time of entries in military time):

Arrived at site 1330 hours. Site is a large well maintained structure. South and west side are only ones accessible. No waste units could be observed. Site is flat with slope estimated at less than 1%. No visible surface water observed. No containments were observed leaving off-site. No unusual odors. The site is active and so fencing is provided, however, it appears that all waste units are inside and thus adequate control for unauthorized personnel entry is provided. Cameras are provided for further security. Size and quantities of waste units cannot be determined. Containment is assumed to be adequate since units are presumed to be inside. No storm sources observed. No stained soil or spills observed. The building appears to be 500 by 300 feet. Left site at 1354 hours. No stressed vegetation or dead animals observed.

Signature: James C. Frost Date: 7/19/89

Countersignature: Hugh Triplett Date: 7/19/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 7/19/89

Site Name: L.A. Dreyfus Co. TDD: 02-8906-41

Notes (Cont'd):

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: James C. Foode Date: 7/19/89

Countersignature: Regla Trujillo Date: 7/19/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 7/19/89

Site Name: L.A. DREVIUS TDD: 02-8906-41

Photolog:

Frame/Photo Number	Date	Time	Photographer	Description
R1 P12 S14	7/19/89	13:42	JF	Looking at south side of the building
R1 P13 S15	7/19/89	13:43	JF	Looking at southwest corner of the building
R1 P14 S16 S17	7/19/89	13:45	JF	Main Entrance looking at northeast of facility

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Angela Trujillo Date: 7/19/89

Countersignature: James C. Frost Date: 7/19/89

REFERENCE NO. 2

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500 SOUTH PLAINFIELD, N. J.
07080 U. S. A.
TELEPHONE: AREA CODE 201 549-1600

PLANT: 3775 PARK AVE., EDISON, N. J.
CABLE: "LADCOMP-EDISON, (NJER)"
TLX: 475-4051

December 7, 1982

Dr. Richard Baker
U.S. EPA Region II
26 Federal Plaza
New York, New York, 10278

Dear Sir:

The L. A. Dreyfus Company (EPA ID #NJD002150993) is currently listed as a generator of hazardous waste and a T.S.D. facility. The classification as a T.S.D. facility has been maintained so that we might accumulate sufficient waste to make full truckload shipments. Unfortunately we border on being a small quantity generator and the accumulation takes about a year and a half. With more registered vendors now willing to take small shipments, we find we are able to ship within the 90-day time limit.

By way of this letter we are requesting that the L. A. Dreyfus Company be delisted as a T.S.D. facility and remain only as a generator. Your prompt attention to this matter would be greatly appreciated.

Sincerely,

Chester A. Czaplicki
Production Manager

CAC:mdes

cc: New Jersey Department of
Environmental Protection

bcc: SMC, CWR

REFERENCE NO. 3

Form VHW-001 (5/82)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY DOCUMENT NO. NJ 0139932

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
L. A. Dreyfus Company	201/549-1600	NJD002153913

ADDRESS (STREET - CITY - STATE): 3775 Park Avenue; Edison, New Jersey, 08820 — ZIP CODE: 08820

TRANSPORTER NO. 1	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Applied Technology, Inc.	201/255-5163	NJD092874814

ADDRESS (STREET - CITY - STATE): 25 Bank Shore Drive; Toms River, New Jersey, 08753 — ZIP CODE: 08753

TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.

ADDRESS (STREET - CITY - STATE): — ZIP CODE:

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Keystone Portland Cement Company	215/837-1881	PAD002389559

SITE ADDRESS (STREET - CITY - STATE): [illegible]3; Route 512, Bath, Pennsylvania, 18014 — ZIP CODE: 18014

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. 1 OF A TOTAL OF 1. THE FIRST MANIFEST DOCUMENT NO. IS NJ→

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvent, N.O.S.	Flammable Liquid	NA 1993	1	350	1	001	03	I	D001
2.	(Tetrahydrofuran,									
3.	Mineral Spirits, Alcohol,									
4.	Xylene, Isopropanol,									
5.	Toluene, Tetrachloroethylene)									
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
Chester A. Czaplicki CHESTER A. CZAPLICKI	PRODUCTION MANAGER	4 (MO.) 8 (DAY) 83 (YR.)	4 (MO.) 11 (DAY) 83 (YR.)

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED
E EBERSTADT	NJSWAS 618AV	04 (MO.) 08 (DAY) 83 (YR.)

TEAR AT THIS PERFORATION

ER-SWM-51
See cover sheet for instructions
Please TYPE or PRINT clearly using a ball point pen—PRESS HARD
PART A

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

HAZARDOUS WASTE MANIFEST

DOCUMENT NO. PA A 4073075

	NAME	SITE ADDRESS	PHONE NO.	EPA I.D. NO.
GENERATOR	L.A. DREYFUS CO.	3775 Park Avenue Edison, NJ	201/549-1600	NJD002150993
TRANSPORTER NO 1	Applied Technology, Inc.	25 South Shore Drive Toms River, NJ	201/255-5163	NJD099128174
TRANSPORTER NO 2 (IF ANY)				
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	Keystone Portland Cement	RD #3, Rte. 512 Bath, PA	215/837-1881	PAD010012318951

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO 1 OUT OF A TOTAL OF 1 THE FIRST MANIFEST DOCUMENT NO IS PA

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM: SOLID	FORM: LIQUID	FORM: GAS	QUANTITY	UNITS: GALLONS	UNITS: CU YDS	UNITS: POUNDS	UNITS: TONS	CONTAINERS: NO	CONTAINERS: TYPE	EPA HAZ CODE	EPA WASTE TYPE
1	~~Waste Solvent NOS~~	Flammable Liquid	NA1993		X		350	X				1	(Bulk) Tank	I	D001
2	(THF, Mineral Spirits,														
3	Toluene, Tetrachloro ethylene, isopropanol,														
4	~~Hexane~~)														

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES OF A NON-HAZARDOUS NATURE INCLUDED IN SHIPMENT WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION. This is to certify that the above named materials are properly classified, described, packaged, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U S EPA, and the State. The wastes described above were consigned to the transporter named. The TSD Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
Judith A. Goplicki	PRODUCTION MANAGER	4/8/83	4 (MONTH) 11 (DAY) 83 (YEAR)

DATE RECEIVED	TRANSPORTER NO 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT	TRANSPORTER NO. 1 H.W.T. ID (License) No.	
04 (MONTH) 08 (DAY) 83 (YEAR)		PA	NUMBER

COPY 3 Generator - Retained By Generator.

TEAR AT THIS PERFORATION

REFERENCE NO. 4

CONFIDENTIAL – RECOMMENDATIONS

TO: Linda Z. Jordan

FROM: Wolf Skacel DATE: 4/6/88

SUBJECT: RCRA inspection of L.A. Dreyfus

Re inspection found the following violations:

(1) 7:26-7.4(b)1 - No return copy for manifest NJ0139732 (a copy of which is enclosed). Dreyfus will contact TSD for the missing copy.

(2) 7:26-7.4(g) 6 i, ii, iii, iv - Dreyfus will keep written documentation of the Personnel Training Program. Dreyfus will begin documenting annual review of training. In addition they will submit to the DEP a outline of actual training received, the course, job title, and job description for each position related to hazardous waste management.

(3) 7:26-7.6(f)4 Dreyfus will contact local hospital in writing and familiarize them with the properties of hazardous waste handled.

All hazardous waste are stored in an explosion proof paint shed. The shed has a 24 hr. surveillance camera, containment for spills and all drums are grounded.

Since the NOV was issued for basically paperwork violations and overall the hazardous waste management program was very good no penalty is recommended.

In addition Dreyfus does not document daily drum inspections. Therefore we can not issue it a conducted. Additional violation is added to record pursuant to NJAC 7:26-9.4(a)5. 1/25-4-8

SUMMARY OF FINDINGS

FACILITY DESCRIPTION AND OPERATIONS

L.A. Dreyfus began operating from this 46 acre facility in 1948. Dreyfus a subsidiary of the W. Wrigley Jr. Co. is a chewing gum base manufacturer. The facility employs between 225 to 250 hourly and salaried employees. The main building contains offices, engineering, quality control, research and development labs, a pilot plant, raw materials warehousing and warehousing. The facility has a tank farm for raw petroleum liquid wax with 2 @ 30,000 gal. storage tanks for #2 fuel oil and other boilers. They have a waste water treatment plant which is not operational and is now only used as a pumping station to the Middlesex County Sewer Authority.

Dreyfus makes the base and bubble base for Wrigley chewing gum. Wrigley adds flavoring, coloring and does the final packaging. Bubble base is made from wood resins which are received in both solid and liquid forms. The solid resins are sent to a crusher and then to a reactor where wax (either solid or liquid), powders (calcium carbonate and talc), and heat are added. The hot liquid is pumped thru filters and then either poured into pans which are refrigerated or to an automatic "LANCASTING" or chester machine where slabs are cooled with water. The slabs are then packaged and put in the warehouse. Base is made from natural gums which are found, then mixed with resins, waxes, and powders. The mixture is poured into underwater pelletizing machines before being packaged.

Describe the activities that result in the generation of hazardous waste.

(1) Quality control & research labs generate hazardous waste - Various chemical and solvents are generated when used to break down gum bases in lab experiments
(2) Machine shop generate waste lube oils - X726
(3) Waste varsol used for clean tools
(4) Perchloroethylene used to cut gum base off (screens used inside gum filters) screens are dipped in PCE tank

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

2 - 55 gal. drums containing waste VARSOL
1 - 55 gal. drum containing Tetrahydrofuran (partial)
1 - 55 gal. drum containing Waste Flammable NOS - Varsol

- No waste oil present

X-726

REFERENCE NO. 5

Form VHW-001 (5/82)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0139935

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
L. A. Dreyfus Company	201-549-1600	NJD002150993
ADDRESS (STREET - CITY - STATE)		**ZIP CODE**
3775 Park Avenue Edison, New Jersey		08820
TRANSPORTER NO. 1	**PHONE (INCLUDE AREA CODE)**	**EPA ID NO.**
Applied Technology Incorporated	201-255-5163	NJD099287484
ADDRESS (STREET - CITY - STATE)		**ZIP CODE**
25 South Shore Drive, Toms River, New Jersey		08753
TRANSPORTER NO. 2	**PHONE (INCLUDE AREA CODE)**	**EPA ID NO.**
ADDRESS (STREET - CITY - STATE)		**ZIP CODE**
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	**PHONE (INCLUDE AREA CODE)**	**EPA ID NO.**
Aquatech Incprporated	219-484-0348	IND088737275
SITE ADDRESS (STREET - CITY - STATE)		**ZIP CODE**
3651 North Clinton Street, P.O. Box 9332, Ft. Wayne, Indiana		46809

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Perchloroethylene	ORM-A	1897	4	00110	1	002	01	T	F001
2.	Waste Solvent (NOS)	Combustible	NA1993	1	00220	1	004	01	I	D001
3.	Waste Solvent (NOS)	Flammable	NA1993	1	00055	1	001	01	I	D001
4.	Waste Perchloroethylene Recovery Drums	ORM-A	1897	2	00550	3	005	01	T	F001
5.	Waste Solvent (NOS) Recovery Drums	Flammable Solid	NA1993	2	00143	3	001	01	I	D001
6.	Waste Solvent (NOS) Recovery Drums	Flammable Solid	NA1993	2	00072	3	001	01	I	D001

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
Philip J. Thomas Philip J. Thomas	Environmental Chemist	10 (MO.) 21 (DAY) 83 (YR.)	10 (MO.) 27 (DAY) 83 (YR.)
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	**TRANSPORTER NO. 1 VEHICLE ID NO.**	**DATE RECEIVED**	
Chris Onofrio Chris Onofrio	NJSWAS681BAW	10 (MO.) 21 (DAY) 83 (YR.)	

TEAR AT THIS PERFORATION

REFERENCE NO. 6

PLEASE PLACE LABEL IN THIS SPACE

I. LOCATION OF INSTALLATION

II. MAILING ADDRESS

III. LOCATION OF INSTALLATION

DETACH

FOR OFFICIAL USE ONLY

COMMENTS	INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr. mo. day)
C	NJD002150993		880819

I. NAME OF INSTALLATION

L A DREYFUS COMPANY

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX	CITY OR TOWN	ST.	ZIP CODE
3 P O B O X 5 0 0	4 S PLAINFIELD	N J	0 7 0 8 0

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER	CITY OR TOWN	ST.	ZIP CODE
5 3 7 5 PARK AVENUE	6 EDISON	N J	0 8 8 1 7

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)	PHONE NO. (area code & no.)
2 DEVANSKY ROBERT VP PRODUCTION	2 0 1 5 4 9 1 6 0 0

V. OWNERSHIP

8 L A DREYFUS COMPANY

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

F = FEDERAL
M = NON-FEDERAL

M

- [X] A. GENERATION
- [ ] B. TRANSPORTATION (complete item VII)
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only – enter "X" in the appropriate box(es))

- [ ] A. AIR
- [ ] B. RAIL
- [ ] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below.

- [ ] A. FIRST NOTIFICATION
- [X] B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.: N J D 0 0 2 1 5 0 9 9 3

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F001					
7	8	9	10	11	12

HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
U154	U210	U213	U220		
37	38	39	40	41	42
43	44	45	46	47	48

LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

☐ 1. IGNITABLE (D001) ☐ 2. CORROSIVE (D002) ☐ 3. REACTIVE (D003) ☐ 4. TOXIC (D004 – D017)

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
Leon T. Dewansky	Vice President - Production	7/3/80

EPA Form 8700-12 (6-80) REVERSE

RF

REFERENCE NO. 7

(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F	N	J	D	0	0	2	1	5	0	9	9	3	3	1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS
	8 0 1 1 1 9	

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	6 3	0 9	0 1

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	6160000	G		7				
2					8				
3					9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)														FOR OFFICIAL USE ONLY											
W	N	J	D	0	0	2	1	5	0	9	9	3	3 1	W	DUP									3 2	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If code is not entered in D(1))
1	F001	10,000 000	P	S01	
2	U154	25000	P	S01	
3	U213	200000	P	S01	
4	U220	75000	P	S01	
5	U044	50000	P	S01	
6	U239	10000	P	S01	
7	D001	5,000 000	P	S01	
8	D002	10 000	P	S01	
9	D003	5 000	P	S01	
10	D004	5000	P	S01	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

◊ *(enter "A", "B", "C", etc. behind the "3" to identify photocopied pages)*

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

F6: A 55 F6: A 56

EPA I.D. NO. *(enter from page 1)*

													T/A	C
F	N	J	D	0	0	2	1	5	0	9	9	3	T	6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
40 34 27.0	074 23 09.0

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
R. A. Devansky	Robert A Devansky	November 18, 1980

X. OPERATOR CERTIFICATION

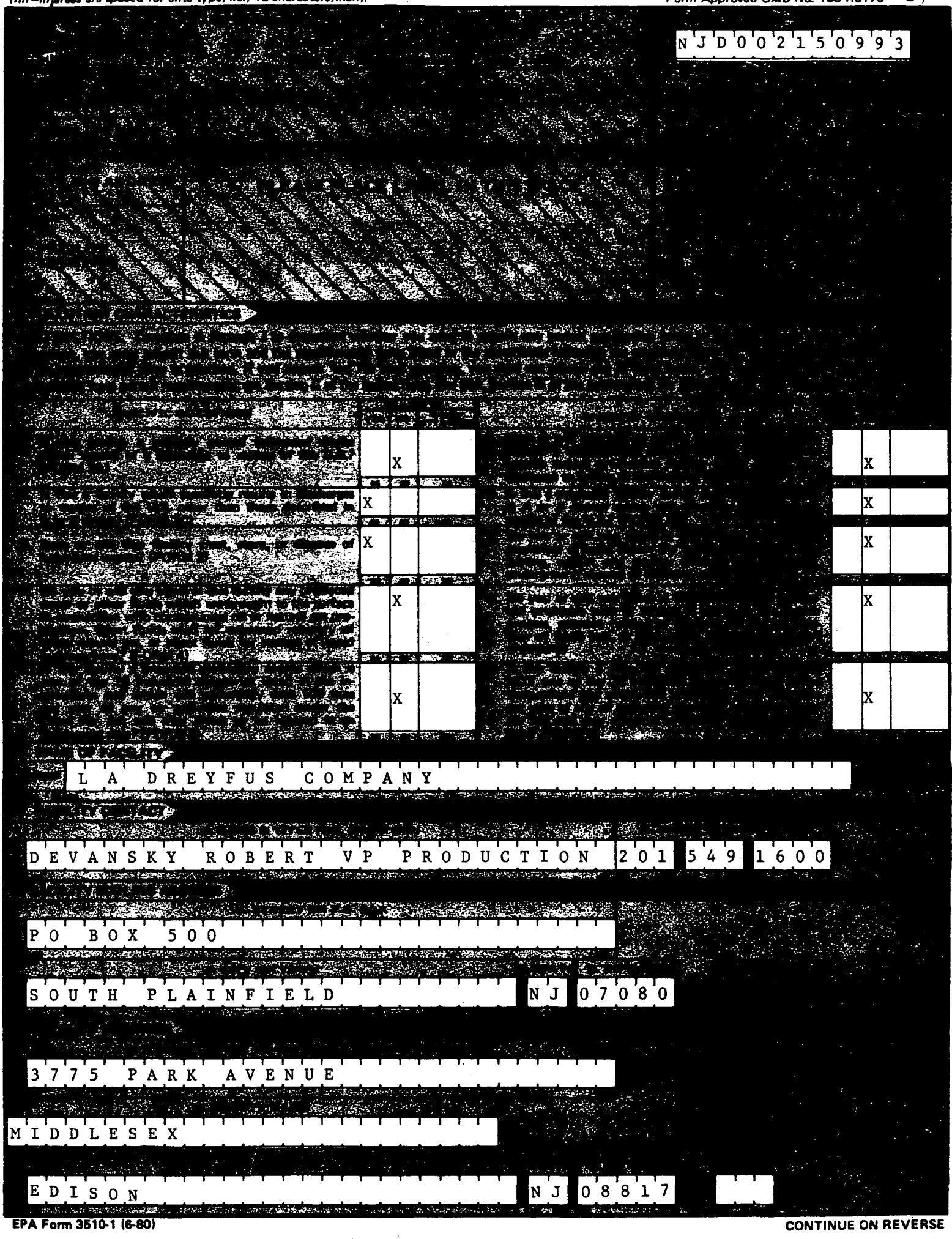
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
R. A. Devansky	Robert A Devansky	November 18, 1980

REFERENCE NO. 8

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175



NJD002150993

	X	
X		
X		
	X	
	X	

	X	
	X	
	X	
	X	
	X	

L A DREYFUS COMPANY

DEVANSKY ROBERT VP PRODUCTION 201 549 1600

PO BOX 500

SOUTH PLAINFIELD NJ 07080

3775 PARK AVENUE

MIDDLESEX

EDISON NJ 08817

EPA Form 3510-1 (6-80)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

2067	(specify) CHEWING GUM BASE MANUFACTURERS		(specify) N/A
	(specify) N/A		(specify) N/A

L A DREYFUS COMPANY

P (specify) 201 549 1600

PO BOX 500

SOUTH PLAINFIELD NJ 07080

NJ 0001210

(specify)

(specify)

The L. A. Dreyfus Company using both natural and synthetic food grade raw materials, compounds chewing gum base for sale to the chewing gum industry.

F9: A/51

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Robert A. Devansky Vice President/Production	Robert A. Devansky, Vice Pres.	11/17/80

REFERENCE NO. 9

RCRA INSPECTION REVIEW SHEET

Name of Facility - LA Dreyfus
RCRA ID= - NJD002150993
Date of Inspection - 8/5/81
Type of Inspection: Generator X Transporter TSD X
Name of EPA/State Inspector - Tom Downey

Findings of Inspection:

265.13 Incomplete waste analysis plan

265.16 Incomplete personnel training plan

Action(s) Taken:

NEW YORK, N.Y. 10007

Action(s) Recommended:

Notice of violation be issued for above violation.

RCRA GENERATOR INSPECTION FORM

COMPANY NAME: L.A. Dreyfus

EPA I.D. NUMBER: NJD002150993

COMPANY ADDRESS: 3775 Park Ave
Edison NJ.

COMPANY CONTACT OR OFFICIAL: Charles A. Czaplicki

INSPECTOR'S NAME: Tom Downey

TITLE: Production Manager II

BRANCH/ORGANIZATION: NJDEP

CHECK IF FACILITY IS ALSO A TSD FACILITY ☒

DATE OF INSPECTION: 8/5/81

	YES	NO	DON'T KNOW
(1) Is there reason to believe that the facility has hazardous waste on site?	X		

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☒ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☐ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☐ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

	YES	NO	DON'T KNOW
b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?	___	X	___

Please explain:

c. Identity the hazardous wastes that are on-site, and estimate approximate quantities of each.
25, 55 gal. drums Perchloroethylene
19, 55 gal. drums Varsol (Solvent NOS)
5, 55 gal. drums Mixed Solvent

d. Describe the activities that result in the generation of hazardous waste.
Lab waste
Degreasing - Perchloroethylene
Varsol - (safety solvent) (part cleaning)

(2) Is hazardous waste stored on site?	X	___	___
a. What is the longest period that it has been accumulated? Nov. 19, 1980			
b. Is the date when drums were placed in storage marked on each drum?	X	___	___
(3) Has hazardous waste been shipped from this facility since November 19, 1980?	[redacted]	X	___
a. If "yes," approximately how many shipments were made? [redacted]			
(4) Approximately how many hazardous waste shipments off site have been made since November 19, 1980? [redacted] Wolkington has been sent off site since Nov. 19, 1			
a. Does it appear from the available information that there is a manifest copy available for each hazardous waste shipment that has been made? [redacted]	___	___	

b. If "no" or "don't know," please elaborate.

	YES	NO	DON'T KNOW
c. Does each manifest (or a representative sample) have the following information?			
- a manifest document number	___	___	___
- the generator's name, mailing address, telephone number, and EPA identification number	___	___	___
- the name, and EPA identification number of each transporter	___	___	___
- the name, address and EPA identification number of the designated facility and an alternate facility, if any:	___	___	___
- a description of the wastes (DOT)	___	___	___
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle	___	___	___
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA	___	___	___
(5) Were there any hazardous wastes stored on site at the time of the inspection?	X	___	___
a. If "yes," do they appear properly packaged (if in containers) or, if in tanks, are the tanks secure?	X	___	___
b. If not properly packaged or in secure tanks, please explain.			
c. Are containers clearly marked and labelled?	X	___	___
d. Do any containers appear to be leaking?	___	X	___
e. If "yes," approximately how many?			

*(6) Has the generator submitted an annual report to EPA covering the previous calendar year? NA

a. How do you know?

(7) Has the generator received signed copies (from the TSD facility) of all manifests for wastes shipped off site more than 35 days ago? NA

a. If "no," have Exception Reports been submitted to EPA covering these shipments?

(8) General comments.

LA Dreyfus manufactures chewing gum. Facility was neat and orderly with generally good housekeeping.

* The effective date for this requirement is March 1, 1982.

REFERENCE NO. 10

RCRA TREATMENT, STORAGE AND DISPOSAL FACILITY INSPECTION FORM
FOR TSD FACILITIES ONLY

COMPANY NAME: LA DREYFUS Company EPA I.D. Number: 3775 Park Ave Edison

COMPANY ADDRESS: NJD002150993

COMPANY CONTACT OR OFFICIAL: Chet Czapucki

OTHER ENVIRONMENTAL PERMITS HELD

BY FACILITY: ☑ NPDES
☑ AIR
☐ OTHER

TITLE: Production Manager

INSPECTOR'S NAME: Bob Dante DATE OF INSPECTION: 11/10/81

BRANCH/ORGANIZATION: NJDEP TIME OF DAY INSPECTION TOOK PLACE: 10:00 AM

(1) Is there reason to believe that the facility has hazardous waste on site? Yes

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

☑ Company admits that its waste is hazardous during the inspection.

☑ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☐ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☑ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☑ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

	YES	NO	DON'T KNOW
b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?	___	✓	___

Please explain:

c. Identify the hazardous wastes that are on-site, and estimate approximate quantities of each.
Perk chloroethylene, 25, 55 gallon
Varsol 33, 55 gallon drums

(2) Does the facility generate hazardous waste?	✓	___	___
(3) Does the facility transport hazardous waste?	___	✓	___
(4) Does the facility treat, store or dispose of hazardous waste?	✓	___	___

VISUAL OBSERVATIONS

	YES	NO	DON'T KNOW
(5) SITE SECURITY (§265.14)			
a. Is there a 24-hour surveillance system?	✓		
b. Is there a suitable barrier which completely surrounds the active portion of the facility? yes			
c. Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?	✓		
(6) Are there ignitable, reactive or incompatible wastes on site? (§265.27)	✓		
a. If "YES", what are the approximate quantities?			
b. If "YES", have precautions been taken to prevent accidential ignition or reaction of ignitable or reactive waste?	✓		
c. If "YES", explain			
d. In your opinion, are proper precautions taken so that these wastes do not:			
- generate extreme heat or pressure, fire or explosion, or violent reaction?	✓		
- produce uncontrolled toxic mists, fumes, dusts, or gases in sufficent quantities to threaten human health?	✓		
- produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions?	✓		
- damage the structural integrity of the device or facility containing the waste?	✓		
- threaten human health or the environment?	✓		

Please explain your answers, and comment if necessary.

e. Are there any additional precautions which you would recommend to improve hazardous waste handling procedures at the facility? no

(7) Does the facility comply with preparedness and prevention requirements including maintaining: (§265.32)

	YES	NO	DON'T KNOW
- an internal communications or alarm system?	✓		
- a telephone or other device to summon emergency assistance from local authorities?	✓		
- portable fire equipment?	✓		
- adequate aisle space?	✓		
- in your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. They have all of the above	✓		

In your opinion, do the types of wastes on site require all of the above procedures, or are some not needed? Explain. See above

*(8) Have you inspected to verify that the groundwater monitoring wells (if any) mentioned in the facility's groundwater monitoring plan (see no. 19 below) are properly installed?	NA		
If you have, please comment, as appropriate.			
(9) a. Is there any reason to believe that groundwater contamination already exists from this facility? If "YES", explain.		✓	
b. Do you believe that operation of this facility may affect groundwater quality?		✓	
c. If "YES", explain.			

RECORDS INSPECTION

(10) Has the facility received hazardous waste from an off-site source since Nov. 19, 1980 (effective date of the regulations)? NA		✓	
a. If "YES", does it appear that the facility has a copy of a manifest for each hazardous waste load received?			
b. How many post-November 19 manifests does it have? (If the number is large, you may estimate)			
c. Does each manifest (or a representative sample) have the following information?			
- a manifest document number			

* This requirement applies only after November 19, 1981.

	YES	NO	DON'T KNOW
- the generator's name, mailing address, telephone number, and EPA identification number	___	___	___
- the name, and EPA identification number of each transporter	___	___	___
- the name, address and EPA identification number of the designated facility and an alternate facility, if any;	___	___	___
- a DOT description of the wastes	___	___	___
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle	___	___	___
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA	___	___	___
d. Are there any indications that unmanifested hazardous wastes have been received since November 19, 1980? If YES, explain.	___	___	___
(11) Does the facility have a written waste analysis plan specifying test methods, sampling methods and sampling frequency? (§265.13)	✓	___	___
a. Does the character of wastes handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? (You may check more than one) Waste characteristics vary ___ All wastes are basically the same ✓ Company treats all waste as hazardous ___ Don't Know ___			
b. Does hazardous waste come to this facility from off-site sources?	___	✓	___
c. If waste comes from an off-site source, are there procedures in the plan to insure that wastes received conform to the accompanying manifest?	NA	___	___
(12) INSPECTIONS (§265.15)			
a. Does the facility have a written inspection schedule?	✓	___	___
b. Does the schedule identify the types of problems to be looked for and the frequency for inspections?	✓	___	___
c. Does the owner/operator record inspections in a log?	✓	___	___
d. Is there evidence that problems reported in the inspection log have not been remedied? If "YES," please explain.	~~✓~~	✓	___

	YES	NO	DON'T KNOW
(13) PERSONNEL TRAINING (§265.16)			
a. Is there written documentation of the following:			
- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?	✓		
- type and amount of training to be given to personnel in jobs related to hazardous waste management?	✓		
- actual training or experience received by personnel?	✓		
(14) Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosion or any unplanned release of hazardous waste? (§265.51)	✓		
a. Does the plan describe arrangements made with local authorities?	✓		
b. Has the contingency plan been submitted to local authorities?	✓		
How do you know?			
c. Does the plan list names, addresses, and phone numbers of Emergency Coordinators?	✓		
d. Does the plan have a list of what emergency equipment is available?	✓		
e. Is there a provision for evacuating facility personnel?	✓		
f. Was an Emergency Coordinator present or on call at the time of the inspection?	✓		
(15) Does the owner/operator keep a written operating record with: (§265.73)			
- a description of wastes received with methods and dates of treatment, storage or disposal?	NA		
- location and quantity of each waste?	NA		
- detailed records and results of waste analysis and treatability tests performed on wastes coming into the facility?	NA		
- detailed operating summary reports and description of all emergency incidents that required the implementation of the facility contingency plan?	NA		
*(16) Does the facility have written closure and post-closure plans? (§265.110)	✓	NA	
a. Does the written closure plan include:			
- a description of how and when the facility will be partially (if applicable) and ultimately closed?	NA		

* Effective date for this requirement is May 19, 1981.

	YES	NO	DON'T KNOW
- an estimate of the maximum inventory of wastes in storage or treatment at any time during the life of the facility?	✓		
- a description of the steps necessary to decontaminate facility equipment during closure?	✓		
- a schedule for final closure including the anticipated date when wastes will no longer be received and when final closure will be completed?	N/A		
b. What is the anticipated date for final closure?	N/A		
†c. Does the owner/operator have a written post-closure plan identifying the activities which will be carried on after closure and the frequency of these activities?	N/A		
d. Does the written post-closure plan include:			
- a description of planned groundwater monitoring activities and their frequencies during post-closure?		✓	
- a description of planned maintenance activities and frequencies to ensure integrity of final cover during post-closure?			
- the name, address and phone number of a person or office to contact during post-closure?			
*(17) Does the owner/operator have a written estimate of the cost of closing the facility? (§265.142) What is it? $5,000	✓		
*(18) Does the owner/operator have a written estimate of the cost for post-closure monitoring and maintenance? What is it? (§265.144)	N/A		
*(19) Has a groundwater monitoring plan been submitted to the Regional Administrator for facilities containing a surface impoundment, landfill or land treatment process? (This requirement does not apply to recycling facilities.) (§265.90)			
a. Does the plan indicate that at least one monitoring well has been installed hydraulically upgradient from the limit of the waste mangement area?	N/A		
b. Does the plan indicate that there are at least three monitoring wells installed hydraulically downgradient at the limit of the waste management area?			

† This section applies only to disposal facilities.

* Effective date for this requirement is May 19, 1981.

SITE-SPECIFIC

Please circle all appropriate activities and answer questions on indicated pages for all activities circled. When you submit your report, include only those site-specific pages that you have used.

STORAGE	TREATMENT	DISPOSAL
Waste Pile p. 9	Tank p. 8	Landfill pp. 10-11
Surface Impoundment p. 8	Surface Impoundment pp. 8-9	Land Treatment pp. 9, 10
(Container p. 7)	Incineration pp. 12-13	Surface Impoundment p. 8
Tank, above ground p. 8	Thermal Treatment pp. 12-13	Other _____
Tank, below ground p. 8	Land Treatment pp. 9-10	
Other _____	Chemical, Physical p. 13 and Biological Treatment (other than in tanks, surface impoundment or land treatment facilities)	
	Other _____	

CONTAINERS (§265.170)

	YES	NO	DON'T KNOW
1. Are there any leaking containers? If "YES", explain.		✓	
2. Are there any containers which appear in danger of leaking? If "YES", explain.		✓	
3. Do wastes appear compatible with container materials?	✓		
4. Are all containers closed except those in use?	✓		
5. Do containers appear to be opened, handled or stored in a manner which may rupture the containers or cause them to leak?		✓	
6. How often does the plant manager claim to inspect container storage areas? weekly			
7. Does it appear that incompatible wastes are being stored in close proximity to one another? If "YES", explain.		✓	
8. Are containers holding ignitable or reactive wastes located at least 15 meters (50 feet) from the facility's property line?	✓		
9. What is the approximate number and size of containers with hazardous wastes? 45, 55 gal drums			

TANKS (§265.190)	YES	NO	DON'T KNOW
1. Are there any leaking tanks? If "YES", explain.	___	___	___
2. Are there any tanks which appear in danger of leaking. If "YES", explain.	___	___	___
3. Are wastes or treatment reagents being placed in tanks which could cause them to rupture, leak, corrode or otherwise fail? If "YES", explain.	___	___	___
4. Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?	___	___	___
5. Where hazardous waste is continuously fed into a tank, is the tank equipped with a means to stop this inflow?	___	___	___
6. Does it appear that incompatible wastes are being stored in close proximity to one another, or in the same tank? If "YES", explain.	___	___	___
7. How often does the plant manager claim to inspect container storage areas?			
8. Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction? If "YES", explain.	___	___	___
9. What is the approximate number and size of tanks containing hazardous wastes?			

SURFACE IMPOUNDMENTS (§265.220)			
1. Is there at least 2 feet of freeboard in the impoundment?	___	___	___
2. Do all earthen dikes have a protective cover to preserve their structural integrity? If "YES", specify type of covering.	___	___	___
3. Is there reason to believe that incompatible wastes are being placed in the same surface impoundment? If "YES", explain.	___	___	___

	YES	NO	DON'T KNOW
4. Are ignitable or reactive wastes being placed in surface impoundments without being treated to remove these characteristics? If "YES", explain.	___	___	___
5. Are there any leaks, failures or is there any deterioration in the impoundments? If "YES", explain.	___	___	___
6. Give the approximate size of surface impoundments (gallons or cubic feet).			

WASTE PILES (§265.250)

1. Is the waste pile protected from wind erosion?	___	___	___
a. Does it appear to need such protection?	___	___	___
b. Explain what type of protection exists.			
2. Does it appear that incompatible wastes are being stored in the same waste pile? If "YES", explain.	___	___	___
3. Is leachate run-off from a pile a hazardous waste? If "YES", explain this determination and answer (a) and (b) below.	___	___	___
a. Is the pile placed on an impermeable base that is compatible with the waste?	___	___	___
b. Is the pile protected from precipitation and run-on?	___	___	___
4. In your judgment, are ignitable or reactive wastes managed in such a way that they are protected from any material or conditions which may cause them to ignite? Please explain or indicate if no such wastes are present.	___	___	___
Are they placed on an existing pile so that they no longer meet the definition of ignitable or reactive waste? Please explain.	___	___	___
5. How many waste piles are on site, and approximately how large are they?			

LAND TREATMENT (§265.270)

1. Can the facility operator demonstrate that the hazardous waste has been made less or non-hazardous by biological degradation or chemical reactions occurring in or on the soil? Please explain.	___	___	___

REFERENCE NO. 11

RCRA GENERATOR INSPECTION FORM

COMPANY NAME: L A DREYFUS Company EPA I.D. NUMBER: NJD002150993

COMPANY ADDRESS: 3775 Park Ave
Edison

COMPANY CONTACT OR OFFICIAL: Chet Czaplicki

INSPECTOR'S NAME: Bob Dante

TITLE: Production Manager says it

BRANCH/ORGANIZATION: NJDEP

CHECK IF FACILITY IS ALSO A TSD FACILITY ✓

DATE OF INSPECTION: 11/10/81

	YES	NO	DON'T KNOW
(1) Is there reason to believe that the facility has hazardous waste on site?	✓		

a. If yes, what leads you to believe it is hazardous waste? Check appropriate box:

- ✓ Company admits that its waste is hazardous during the inspection.
- ✓ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.
- ✓ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)
- ☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)
- ✓ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)
- ✓ EPA testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)
- ☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

NEW YORK, N.Y. 10007

	YES	NO	DON'T KNOW
b. Is there reason to believe that there are hazardous wastes on-site which the company claims are merely products or raw materials?	___	✓	___

Please explain:

c. Identity the hazardous wastes that are on-site, and estimate approximate quantities of each.
25 - 55 gallon drums of perkchloroethylene
23 - 55 gallon drums of Varisol

d. Describe the activities that result in the generation of hazardous waste. Processing gum base plates

(2) Is hazardous waste stored on site?	✓	___	___
a. What is the longest period that it has been accumulated? 2 years			
b. Is the date when drums were placed in storage marked on each drum?	✓	___	___
(3) Has hazardous waste been shipped from this facility since November 19, 1980?	___	✓	___
a. If "yes," approximately how many shipments were made?			
(4) Approximately how many hazardous waste shipments off site have been made since November 19, 1980?			
a. Does it appear from the available information that there is a manifest copy available for <u>each</u> hazardous waste shipment that has been made?	___	___	___
b. If "no" or "don't know," please elaborate.			

	YES	NO	DON'T KNOW
c. Does each manifest (or a representative sample) have the following information?			
- a manifest document number	___	___	___
- the generator's name, mailing address, telephone number, and EPA identification number	___	___	___
- the name, and EPA identification number of each transporter	___	___	___
- the name, address and EPA identification number of the designated facility and an alternate facility, if any:	___	___	___
- a description of the wastes (DOT)	___	___	___
- the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle	___	___	___
- a certification that the materials are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation under regulations of the Department of Transportation and the EPA	___	___	___
(5) Were there any hazardous wastes stored on site at the time of the inspection?	✓	___	___
a. If "yes," do they appear properly packaged (if in containers) or, if in tanks, are the tanks secure?	✓	___	___
b. If not properly packaged or in secure tanks, please explain.			
c. Are containers clearly marked and labelled?	✓	___	___
d. Do any containers appear to be leaking?	___	✓	___
e. If "yes," approximately how many?			

*(6) Has the generator submitted an annual report to EPA covering the previous calendar year? NA ___ ___

a. How do you know?

(7) Has the generator received signed copies (from the TSD facility) of all manifests for wastes shipped off site more than 35 days ago? NA ___ ___

a. If "no," have Exception Reports been submitted to EPA covering these shipments? ___ ___ ___

(8) General comments.

* The effective date for this requirement is March 1, 1982.

RCRA INSPECTION REVIEW SHEET

Name of Facility - LA Dreyfus Company
RCRA ID= - NJD002150993
Date of Inspection - 11/10/81
Type of Inspection: (Generator) Transporter (TSD) Follow up
Name of EPA/State Inspector - Bob Dante NJDEP

Findings of Inspection: The facilities has corrected all paper violations and is now in full compliance.

Action(s) Taken: NONE

Action(s) Recommended: NONE

NEW YORK, N.Y. 10007

REFERENCE NO. 12

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
32 E. Hanover St., CN 027, Trenton, N.J. 08625

JACK STANTON
DIRECTOR

LINO F. PEREIRA
DEPUTY DIRECTOR

August 5, 1983

Chester A. Czaslicki, Production Manager
L.A. Dreyfus Company
PO Box 500
South Plainfield, NJ 07080

RE: Facility Operating Status

Dear Mr. Czaslicki:

The Bureau of Hazardous Waste Engineering has reviewed your company's responses dated December 7, 1982 and March 2, 1983 to the Notice of Violation, Failure to Submit Annual Report. The Bureau finds that these responses contain adequate information to determine the operating status of this facility with respect to N.J.A.C. 7:26-1 et seq., the New Jersey Hazardous Waste Management Regulations. The Bureau has determined that the company's hazardous waste treatment, storage or disposal facility as delineated in the company's RCRA Part A application and identified by the following EPA ID Number:

EPA ID NO. NJD 002150993

has been excluded from applicable facility regulations under N.J.A.C. 7:26-1.1 et seq. because your facility accumulates hazardous waste on-site for less than 90 days. This exclusion classifies your facility solely as a generator provided the following conditions are complied with:

1. All such waste is, within 90 days or less, shipped off-site to an authorized facility or placed in an on-site authorized facility, as defined at N.J.A.C. 7:26-1.4.

2. The waste is placed in containers which meet the standards of N.J.A.C. 7:26-7.2 and are managed in accordance with N.J.A.C. 7:26-9.4(d).

3. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.

4. The generator complies with the requirements for owners and operators of N.J.A.C. 7:26-9.6 and 9.7 concerning preparedness and prevention, contingency plans and emergency procedures as well as N.J.A.C. 7:26-9.4(g) concerning personnel training.

This written acknowledgement of the exclusion of the above identified facility from N.J.A.C. 7:26-1 et seq. is based expressly on the review of the aforementioned correspondence. This letter makes no claim as to the extent and physical condition of the actual hazardous waste activities occuring at the site mentioned above.

Your company's hazardous waste facility above is no longer included in DEP's list of "existing facilities" (see N.J.A.C. 7:26-1.4 and 12.3) and therefore does not need to conform with the interim operating requirments of N.J.A.C. 7:26-1 et seq. for "existing facilities" which would include the TSD facility annual report. It is the company's responsibility to operate within the conditions listed above. To operate a hazardous waste facility without prior approval from the DEP is a violation of the Solid Waste Management Act N.J.S.A. 13:1E-1 et seq.

As a result of the conclusions previously made, the Notice of Violation entitled "Failure to Submit Annual Report" signed by Mr. David Shotwell is rescinded and need not be complied with.

If you have any questions on this matter, please call my office at (609) 292-9880.

Very truly yours,

Frank Coolick, Chief
Bureau of Hazardous Waste Engineering

FC:jb

c: Ron Corcory
NJDEP, DWM, Bureau of Field Operations

Dave Shotwell
NJDEP, DWM, Bureau of Compliance and Enforcement

Joel Golumbek
USEPA, Region II

Dr. Dave Leu
NJDEP, DWM, BHWCM

REFERENCE NO. 13

Studies of the Early Mesozoic Basins of the Eastern United States

ALBERT J. FROELICH and GILPIN R. ROBINSON, Jr., editors

A summary of current research on early Mesozoic sedimentary and igneous rocks and related mineral resources and studies of geophysics, structure, and tectonics of the basins of the Eastern United States

U.S. GEOLOGICAL SURVEY BULLETIN 1776

STRATIGRAPHIC FRAMEWORK AND DISTRIBUTION OF EARLY MESOZOIC ROCKS OF THE NORTHERN NEWARK BASIN, NEW JERSEY AND NEW YORK

R.A. Parker, H.F. Houghton,[1] and R.C. McDowell

Abstract

Sedimentary rocks below the Early Jurassic Orange Mountain Basalt in the Newark basin in New Jersey and New York are divided into three formations: the Stockton and Lockatong Formations of Late Triassic age and the overlying Passaic Formation (herein adopted) of Late Triassic and Early Jurassic age. Field mapping in the northern part of the basin has shown that dark-gray shale and siltstone of the Lockatong Formation tongue out into arkosic sandstone of the upper Stockton. The Passaic Formation can be subdivided into four informal, mappable lithofacies units, largely on the basis of their stratigraphic position, areal distribution, color, and grain size. Paleocurrent indicators and the distribution of lithofacies in the Passaic suggest a strongly south-southwest-oriented axial paleoflow in the northern Newark basin. The composition and areal distribution of the stratigraphic units in the basin should prove useful in deciphering the geologic history of the area.

INTRODUCTION

Sedimentary rocks below the Orange Mountain Basalt (the first Watchung Basalt of earlier workers) in the northern Newark basin in New Jersey and New York are subdivided into three formations of early Mesozoic age: arkosic sandstone and red siltstone and sandstone of the Stockton Formation, cycles of gray and black argillite and siltstone of the Lockatong Formation, and red-brown mudstone, siltstone, sandstone, and conglomerate of the Passaic Formation (table 1). Existing geologic maps show various interpretations of stratigraphic relations among the three formations in the northern part of the Newark basin. Difficulties are encountered where criteria used to establish boundaries between the formations elsewhere in the basin are applied in the northern part because of lateral changes in the formations and interfingering. A number of maps and measured sections (U.S. Geological Survey, 1967; Savage, 1968; Sanders, 1974; Olsen, 1980a) indicate that the Passaic Formation (herein adopted; lower part of the Brunswick Formation of earlier workers) becomes significantly coarser grained northward, and north of the pinchout of the Lockatong, the Passaic directly overlies the Stockton. Field work for this study was initiated with three principal objectives: (1) to examine stratigraphic relations among these early Mesozoic formations, (2) to determine whether the lithologic subdivision of the Passaic Formation used by Savage (1967, 1968) in Rockland County, New York, could be extended southward into New Jersey, and (3) to ascertain whether gray siltstones in the Passaic Formation in the central part of the basin could be traced into the northern part.

Our mapping in the northern part of Newark basin has shown Stockton lithology both above and below the Lockatong Formation and has confirmed that the Lockatong Formation intertongues with the Stockton Formation near their intrusion by the Palisade Diabase as noted by Van Houten (1969, p. 342) and later demonstrated by Olsen (1980c) (fig. 1). The Passaic Formation has been shown to directly overlie the Stockton Formation everywhere in the mapped area and has been divided into four lithologic units somewhat modified from those of Savage (1968) (fig. 1).

The geologic map (fig. 1) shows what we consider to be mappable units within the early Mesozoic rocks of the northern Newark basin, on the basis of the results of previous workers and our own field observations and examination of core samples and logs. Positions of lithologic contacts are interpretive in many places not only because of the gradational nature of the contacts but also because of extensive glacial or urban cover.

STRATIGRAPHIC UNITS

Stockton Formation

At the composite type section on the Delaware River, the Stockton Formation is approximately 1,500 m thick (McLaughlin, 1959). The dominant lithologies are gray and buff-colored arkose and arkosic conglomerate and red siltstone and arkosic sandstone. The formation generally is more fine grained near the top, and the proportion of red shale and siltstone is greater. The top of the Stockton is placed at the base of the lowest continuous black siltstone unit of the overlying Lockatong Formation (Olsen, 1980c). In the northern Newark basin the Stockton sequence below the Lockatong thins to less than 250 m (Olsen, 1980c). Examination of approximately 62 ft of core from 11 different holes in the Secaucus, New Jersey, area indicated that Stockton-like lithology occurs in stratigraphic positions as much as 300 m above the Lockatong Formation. The total core consisted of about 64 percent white to tan arkose, 27 percent

[1]New Jersey Geological Survey, CN 029, Trenton, NJ 08625.

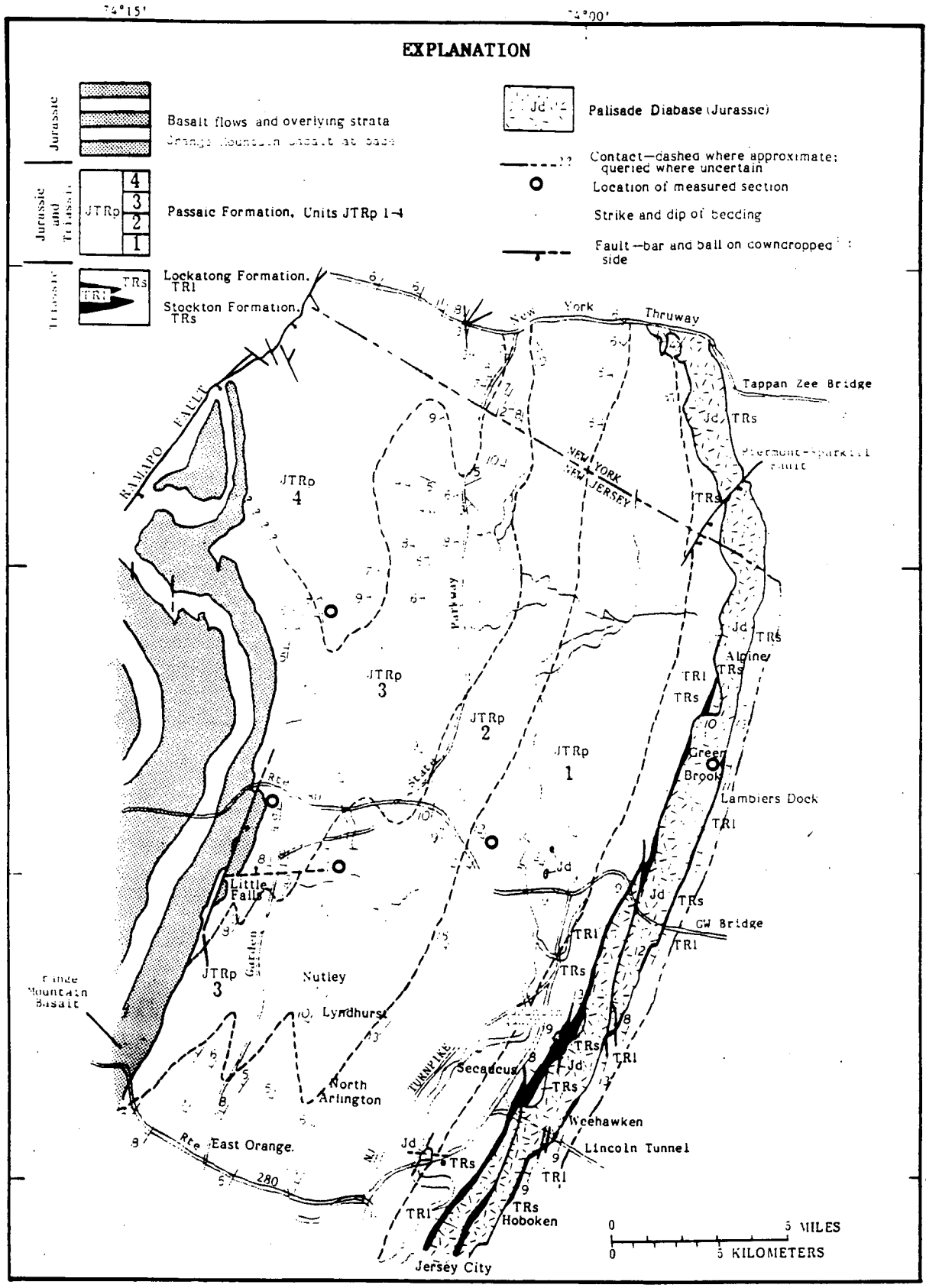


Figure 1. Geologic map showing outcrop localities and distribution of lithofacies of the Passaic Formation, and the Lockatong and Stockton Formations. Locations of measured sections in figures 2 and 3 are shown on map.

detrital type cycle of Van Houten (1962) and suggests that during deposition of chemical cycles in the central part of the basin either no deposition took place in the northern part or arkosic sandstone was deposited locally. The absence of chemical cycles in the study area and the abundance of arkosic sandstone-bearing sequences interbedded with the Lockatong Formation in the northern part of the basin favor Olsen's idea that they may correspond to chemical cycles of the central basin. The upper Lockatong sequence above the Palisades sill, described by Olsen (Granton quarry section) (1980b, p. 378, 1984), contains a vertebrate fossil assemblage that does not correlate with the lowermost Lockatong members of Olsen (Olsen, personal commun., 1986). The stratigraphic positions of the arkosic sandstone beds that intertongue with the upper Lockatong sequence north of Jersey City provide indirect evidence to suggest that they may correlate to the thick cluster of chemical cycles shown by Van Houten (1962) near the middle of the Lockatong Formation along the Delaware River.

Passaic Formation

The Passaic Formation (Olsen, 1980a; herein adopted for use in New Jersey and New York by the U.S. Geological Survey) in the central Newark basin overlies the Lockatong Formation in gradational contact. It consists mostly of red and gray mudstone and siltstone deposited in cyclic sequences. Cycles in the Passaic Formation range from lacustrine sequences identical to those of the Lockatong Formation to entirely red mudflat cycles that culminate in rippled cross-laminated siltstone, as described by Smoot and Olsen (1985).

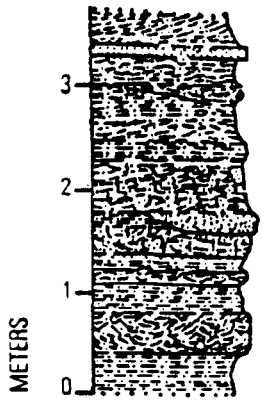
In the northern Newark basin, the Passaic Formation changes character and has been divided into four lithofacies units that are mappable in the study area (fig. 1). Massive gray lacustrine beds in the Passaic Formation delineated in the central portion of the basin (Olsen, 1984) appear to be less abundant in the northern part of the basin. Several localities of gray beds in Units 1 and 2 (fig. 1) have been noted: (1) along Route 280 near East Orange, New Jersey (Olsen, personal commun., 1986), (2) at Schuyler Mine near North Arlington, New Jersey, at mines near Lyndhurst, New Jersey, and at exposures near Secaucus, New Jersey (Olsen, 1980b), and (3) from a core log near Little Falls, New Jersey. Correlation of these gray beds with gray beds of the central basin is not certain, although Olsen (1980b, p. 375) suggests that the gray beds near Secaucus could be laterally equivalent to McLaughlin's (1948) Graters Member.

Red-bed cycles become increasingly prevalent toward the top of the Passaic Formation in the central basin. In the northern Newark basin, cycles are apparently obscured by channel and floodplain deposits, reflecting higher discharges in stream systems. The coarseness of fluvial facies within the Passaic Formation (Units 3 and 4, figs. 1 and 3) in the northern basin may reflect the availability of coarse material in the source area, higher velocities in stream systems, or high-gradient stream systems influenced by alluvial fans that prograded toward the east, southeast, and southwest from the northwest margin. Preliminary results from paleocurrent indicator measurements indicate a strongly south-southwest oriented axial flow in the northern Newark basin (fig. 4). Coarsening of the sediments and an increase in large-scale trough cross-stratification toward the northwest, and the occurrence and dispersal pattern of clasts of Cambrian-Ordovician limestone and Devonian sandstone (Savage, 1967) in Units 3 and 4 (fig. 1), indicate a possible source of sediment and paleoflow from the northwest basin margin and suggest flow of tributary streams toward the axial drainage system.

Progressive coarsening of facies in the Passaic Formation toward the northwest margin permits the delineation of the four lithofacies units shown on the map (fig. 1). Measured sections of typical facies associations are shown graphically in figure 3. The general progression of most of the Passaic is coarsening upward toward the northwest margin of the basin, although the lowermost facies fines upward from the coarse- to medium-grained sandstone of the underlying Stockton beds. The lithofacies used in mapping for this study are given below.

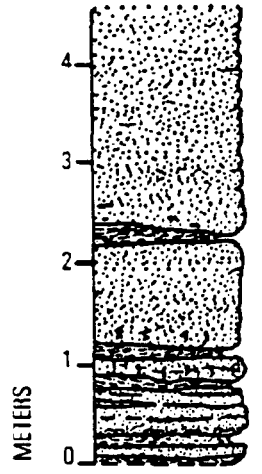
The lower, fine-grained lithofacies of the Passaic Formation (Unit 1) forms a belt that widens toward the southwest and grades laterally into the main body of the formation in the central basin. The overlying Unit 2 tongues into Unit 1, and the overlying coarse-grained units progressively tongue out to the south and form a concentric pattern around the alluvial fan complex along the northwest fault margin. The unit boundaries shown here for the lithofacies of the Passaic Formation (fig. 1) differ somewhat from those of Savage (1968) as used in a modified form on the State geologic map of New York (Fisher and others, 1970). Most of these differences can be attributed to our higher placement of the upper Stockton contact on the basis of different criteria and to lateral changes in the coarseness of the conglomeratic sandstone facies in the northern end of the basin.

Unit 1.—Siltstone, mudstone, and sandstone facies. This unit is characterized by thick fining-upward sequences of intercalated massive siltstone and mudstone. The massive mudstone commonly overlies indistinctly laminated siltstone and is characterized by intense burrowing, lack of bedding or sedimentary structures, polygonal mud cracks, and scattered lenses of carbonate nodules. Associated with some of the massive mudstone units are sandstone beds that are cross-laminated or have steep, tabular cross-beds. Channel-fill beds contain mostly trough cross-laminated fine-grained sandstone, com-



Sandstone, very fine, micaceous; no lamination apparent
Siltstone, muddy, micaceous; indistinct lamination
Siltstone, coarse; ripple or trough cross-laminated
Siltstone, muddy, micaceous; indistinct lamination
Siltstone, coarse, fissile, thin bedded
Siltstone, muddy, micaceous; irregular horizontal lamination; appears to have ripple and trough-fill bedding; small burrows on bedding planes
Sandstone, very fine, micaceous, coarsens upward; wavy and trough-fill bedded; parting surfaces heavily burrow marked
Mudstone, silty, micaceous; thin (0.5 cm) bedded; coarsens upward
Siltstone, wavy-bedded, fissile; calcareous cement; alternating laminae are silt-rich and mud-rich
Siltstone, muddy, micaceous
Siltstone, coarse; and sandstone, very fine, dark red-brown, micaceous; prominent trough cross-lamination; calcite cement
Mudstone, silty, bright red-brown, micaceous, indistinctly laminated

Unit JTRp 1—Siltstone, mudstone, and sandstone facies



Sandstone, medium, red-brown, feldspathic; bedding mostly 5–10 cm thick; indistinct trough cross-lamination

Rare shale chips and subround to round pebbles at base
Mudstone, sort, slightly micaceous; irregular laminae 3–6 mm thick; lensoidal beds

Sandstone, medium, red-brown, feldspathic; vertical burrows near base

Mudstone, silty, micaceous, irregularly bedded, fissile; lensoidal beds

Sandstone, fine to medium, feldspathic to very feldspathic, micaceous in part; indistinct low-angle cross-lamination; horizontal burrows

Unit JTRp 2—Sandstone and mudstone facies

Figure 3. Measured sections from Passaic Formation, northern Newark basin, showing typical facies associations of map units JTRp 1–4.

monly with "Scoyenia" burrows (Olsen, 1980b). In general, the unit fines upwards, but is sandier in the middle and towards the base. The lower part of Unit 1 is mostly fine-grained sandstone deposited in small channels, except for local sandstone beds 1 to 3 m thick. Unit 1 grades laterally into cyclic sequences of red and gray mudstone and siltstone of the Passaic Formation in the central Newark basin.

Unit 2.—Sandstone and mudstone facies. This unit consists of a major increase in coarser grained intervals over those of Unit 1. Progressing upward and marginward in the basin-fill sequence, massive mudstone typical of Unit 1 becomes less common in Unit 2, particularly in the upper part where fine- to medium-grained, planar to trough cross-bedded sandstone dominates. Sandstone is usually feldspathic and micaceous. Fining-upward sequences from 1.5 to 5 m thick are typical. This facies represents an increase in fluvial channel predominance compared to the lower Passaic Formation floodplain.

Unit 3.—Pebbly sandstone facies. Thick-bedded, coarse-grained, pebbly sandstone, including mainly feldspathic sandstone and limestone and quartz pebble lags, characterizes this facies; mudstone is a minor component. Sandstone beds consist of flat-laminated to trough cross-bedded units, and some trough sets are several meters thick. Pebbly beds having scoured bases (possibly channel fills) increase toward the top of this unit. This facies represents higher velocity streams than those in Unit 2.

Unit 4.—Conglomeratic sandstone facies. Channel-fill beds in this unit are conglomeratic and locally consist of quartz, quartzite, limestone, Devonian(?) sandstone, and

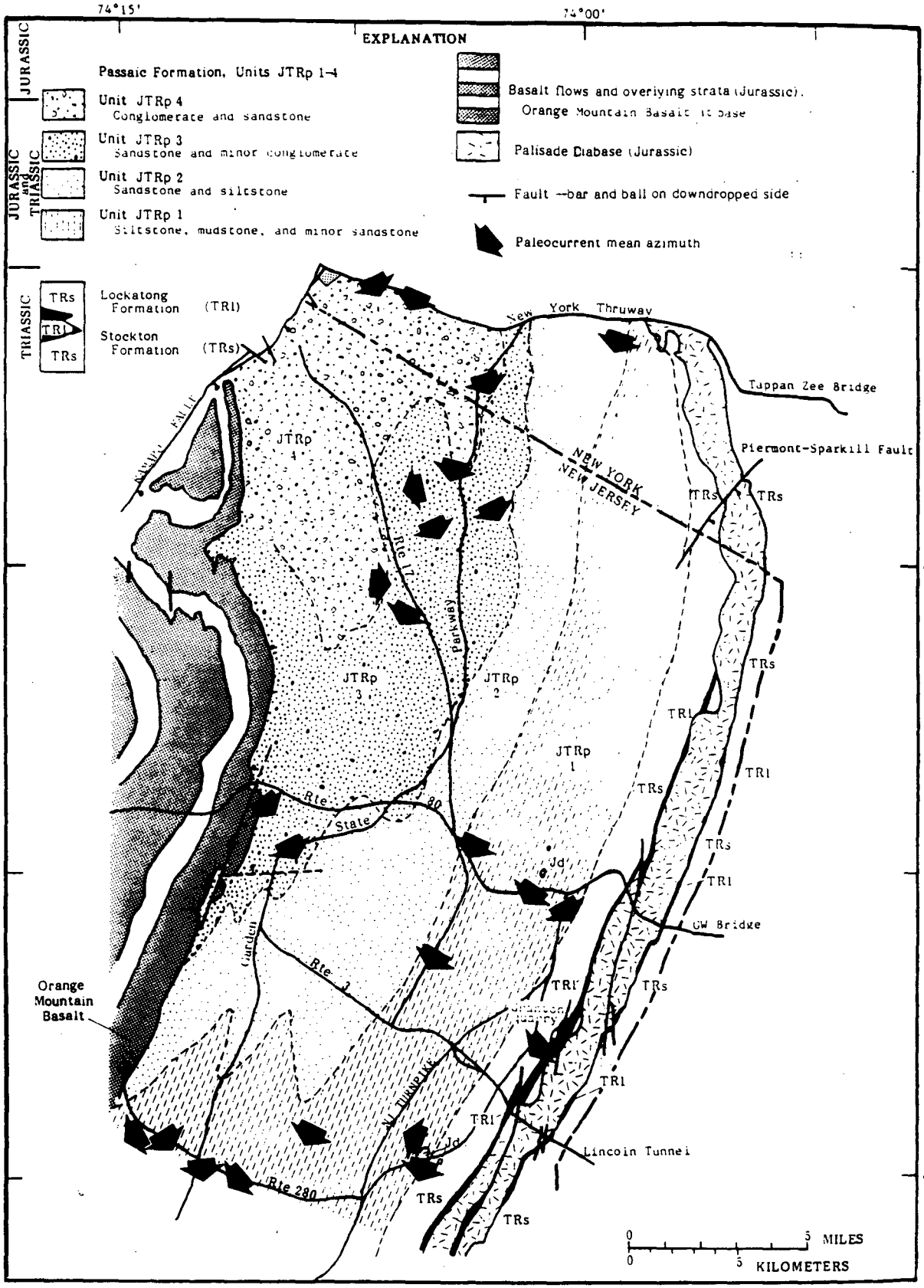
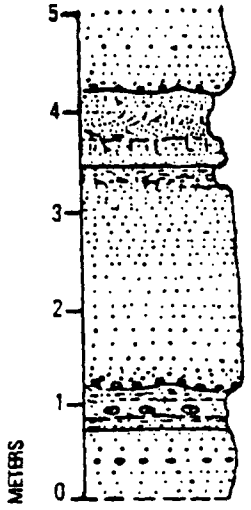


Figure 4. Map showing the relation of paleocurrent indicators to the distribution of Passaic Formation lithofacies. Nearly all readings are maximum-dip azimuths of troughs in cross-bedded sandstone of the Passaic Formation. Each arrow represents the mean of several azimuth measurements made at each station. A total of 113 measurements at 24 stations was recorded.



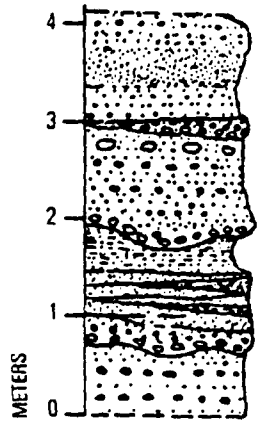
Fining-upward sequence: fine sandstone to siltstone; low-angle trough to horizontal lamination; burrows common in upper part of coarse sandstone bed

Fining-upward sequence: coarse to medium sandstone, brownish-red; 30 percent feldspar; horizontal planar lamination; scoured base with pebble lags

Mudstone, silty, dark red-brown, micaceous; lower part burrowed with faint trough lamination; middle part indistinctly bedded with calcite nodules and root casts

Sandstone, medium, red-brown, feldspathic, with scattered pebble layers; indistinctly laminated; horizontal planar bedding

Unit JTRp 3—Pebbly sandstone facies



Coarsening-upward sequence (no break with underlying coarse sandstone): quartz pebbles, subangular to subrounded, mostly 2 cm in diameter

Sandstone, coarse, dark red-brown; 20 percent pink feldspar grains; indistinctly bedded; breaks off on trough-shaped surfaces

Sandstone, coarse to medium; fining upward

Sandstone, medium to coarse, red-brown; 20 percent feldspar; scattered pebble layers; cobble layer near top; indistinct lamination; deeply scoured base with pebble lag; scattered small trough cross-beds

Sandstone, thin-bedded; fines upward to muddy siltstone

Sandstone, medium, red-brown, arkosic, trough cross-bedded; pebble lenses; fines upward slightly; scour-fill base

Sandstone, medium, feldspathic; indistinct bedding; scattered pebble layers

Unit JTRp 4—Conglomeratic sandstone facies

Figure 3. Continued.

mudstone pebbles and cobbles. Channels range in width from 3 to more than 15 m and consist of fining-upward and coarsening-upward pebbly coarse-grained sandstone sequences 1 to 5 m thick. The graded channel fills apparently record the passing of floods. The abundance and dispersal pattern of Paleozoic(?) clasts in this unit suggest a source to the northwest. Scour and fill, irregular cross-bedding, and lens- or wedge-shaped beds suggest a braided-stream origin, possibly associated with alluvial fan development along the northwestern basin margin for much of this unit. Gravel-filled channel beds and matrix-supported debris-flow beds are not mapped separately because of poor exposure; they appear to be limited to small areas within 2 to 3 km of the northwestern basin margin.

SUMMARY

Recent mapping in the northern Newark basin has delineated the nature and extent of intertonguing between the Stockton and Lockatong Formations and has resulted in a fourfold mappable subdivision of the overlying Passaic Formation (herein adopted). The composition and areal distribution of these stratigraphic units provide a basis for eventual determination of the sedimentological and tectonic evolution of the basin.

ACKNOWLEDGMENTS

We thank Nicholas M. Ratcliffe and William C. Burton for access to their field data on the structure of

northern Newark basin. We are indebted to Paul E. [illegible]en for his field map compilation and his conversations [illegible]h Houghton on the stratigraphy of the Lockatong [illegible]rmation. We appreciate the guidance of Franklin Van [illegible]outen on the stratigraphy of the Stockton Formation. [illegible]pport for the COGEOMAP program in New Jersey is [illegible]vided in part by the 1981 Water Supply Bond Fund, [illegible]ministered by the Division of Water Resources, New [illegible]sey Department of Environmental Protection.

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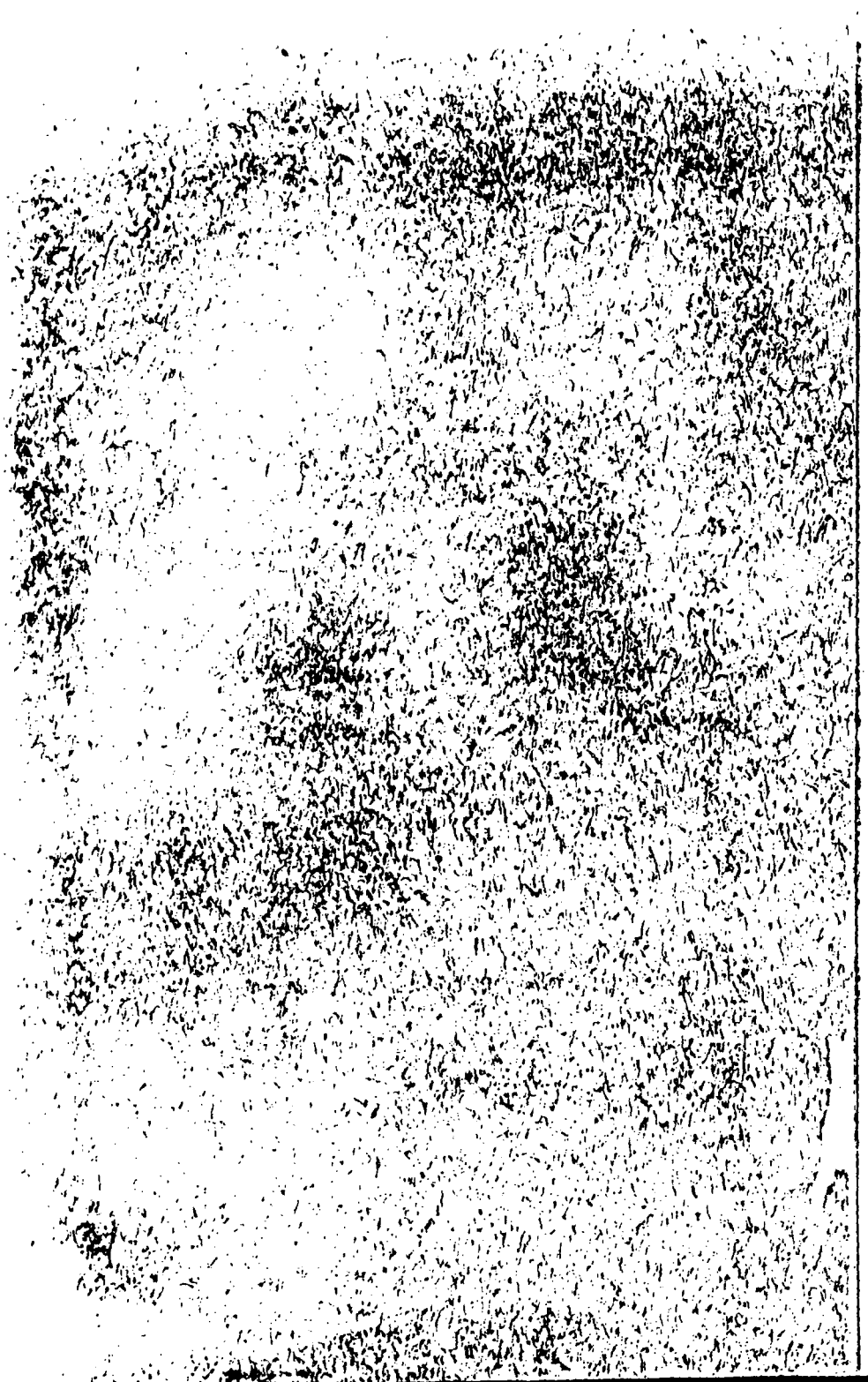


STATE OF NEW JERSEY
STATE WATER POLICY COMMISSION
HOWARD T. CRITCHLOW, ENGINEER IN CHARGE

The Ground-Water Supplies of Middlesex County New Jersey

With Special Reference to the Part of the Coastal Plain Northeast of Jamesburg

By

HENRY C. BARKSDALE

MEREDITH E. JOHNSON ROGER C. BAKER

EDWARD J. SCHAEFER GEORGE D. DEBUCHANANNE

Prepared in cooperation with the United States Department of the Interior, Geological Survey

STRATIGRAPHIC TABLE FOR MIDDLESEX COUNTY, N. J.

Cenozoic sequence
- Quaternary system
  - Recent series
    - Alluvium
    - Eolian deposits
  - Pleistocene series
    - Wisconsin drift
    - Cape May formation
    - Pensauken formation

UNCONFORMITY

Mesozoic sequence.
- Cretaceous system
  - Upper Cretaceous series
    - Mount Laurel and Wenonah sands
    - Marshalltown formation
    - Englishtown sand
    - Woodbury clay
    - Merchantville clay
    - Magothy formation
    - Raritan formation
      - Amboy stoneware clay
      - Old Bridge sand member
      - South Amboy fire-clay
      - Sayreville sand member
      - Woodbridge clay
      - Farrington sand member
      - Raritan fire-clay

UNCONFORMITY

- Triassic system
  - Upper Triassic series (Newark group)
    - Brunswick shale
    - Lockatong formation
    - Stockton formation

UNCONFORMITY

Proterozoic sequence (?)
- Pre-Cambrian (?)
  - Wissahickon formation

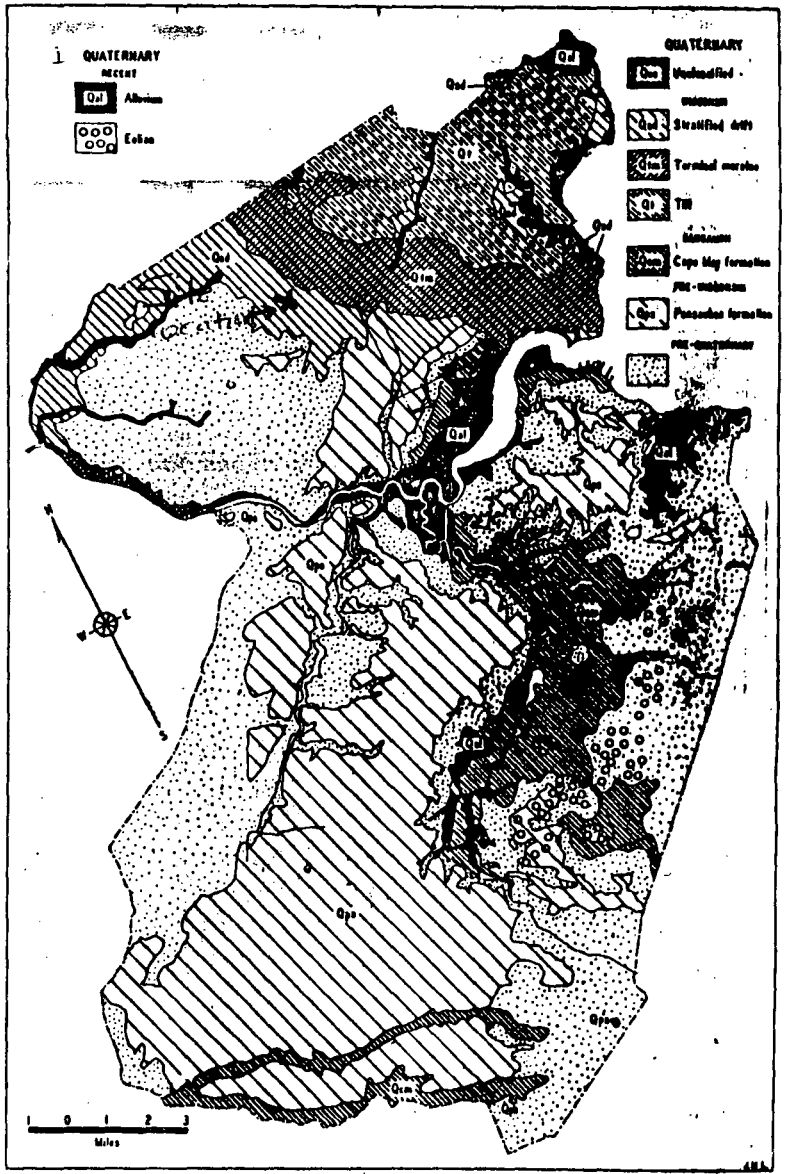


FIGURE 4.—Map of Middlesex County showing the areal distribution of the rocks of the Quaternary system. Small quantities of good water are obtained from the eolian deposits, the stratified drift, the Cape May and Pensauken formations, and the unclassified deposits.

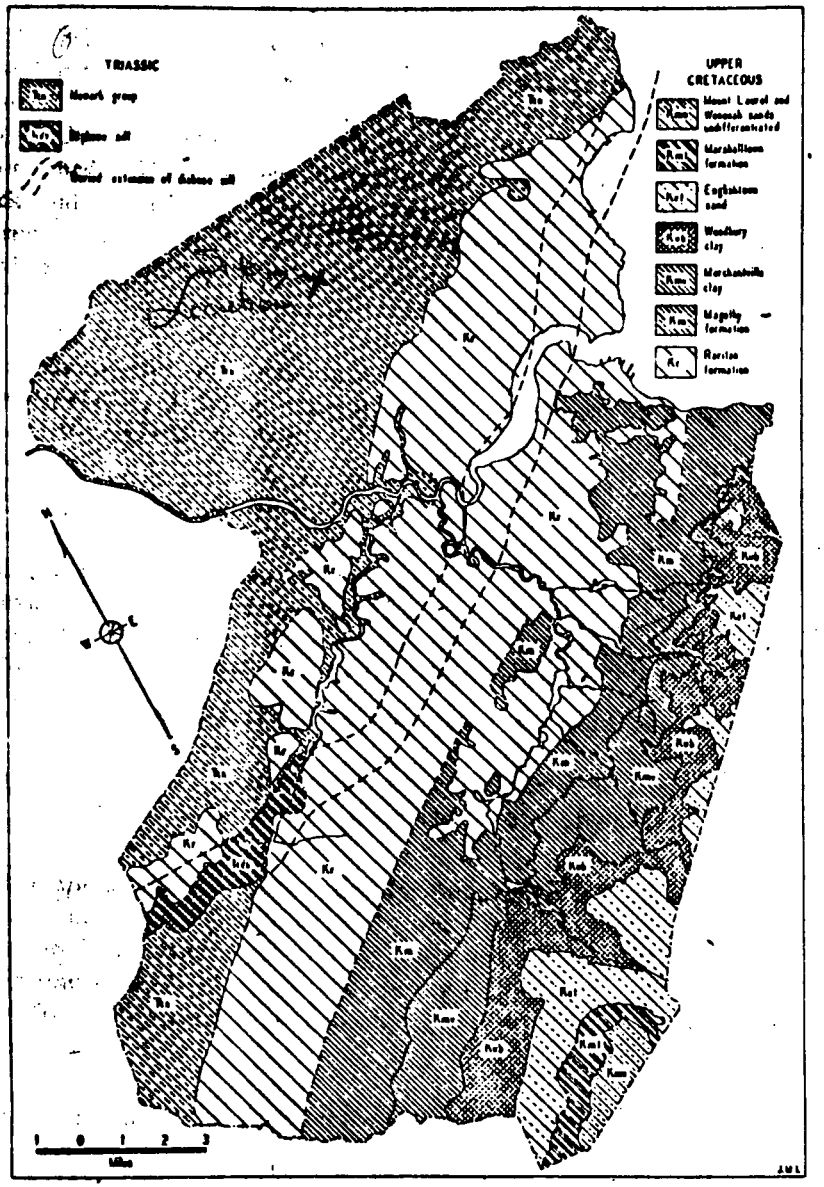


FIGURE 5.—Map of Middlesex County showing the exposures of the rocks of the Triassic and Cretaceous systems. Small quantities of good water are obtained from the Mount Laurel and Wenonah sands, the Englishtown sand and the Magothy formation within the county. Substantial quantities are derived from the Raritan formation and the rocks of the Newark group.

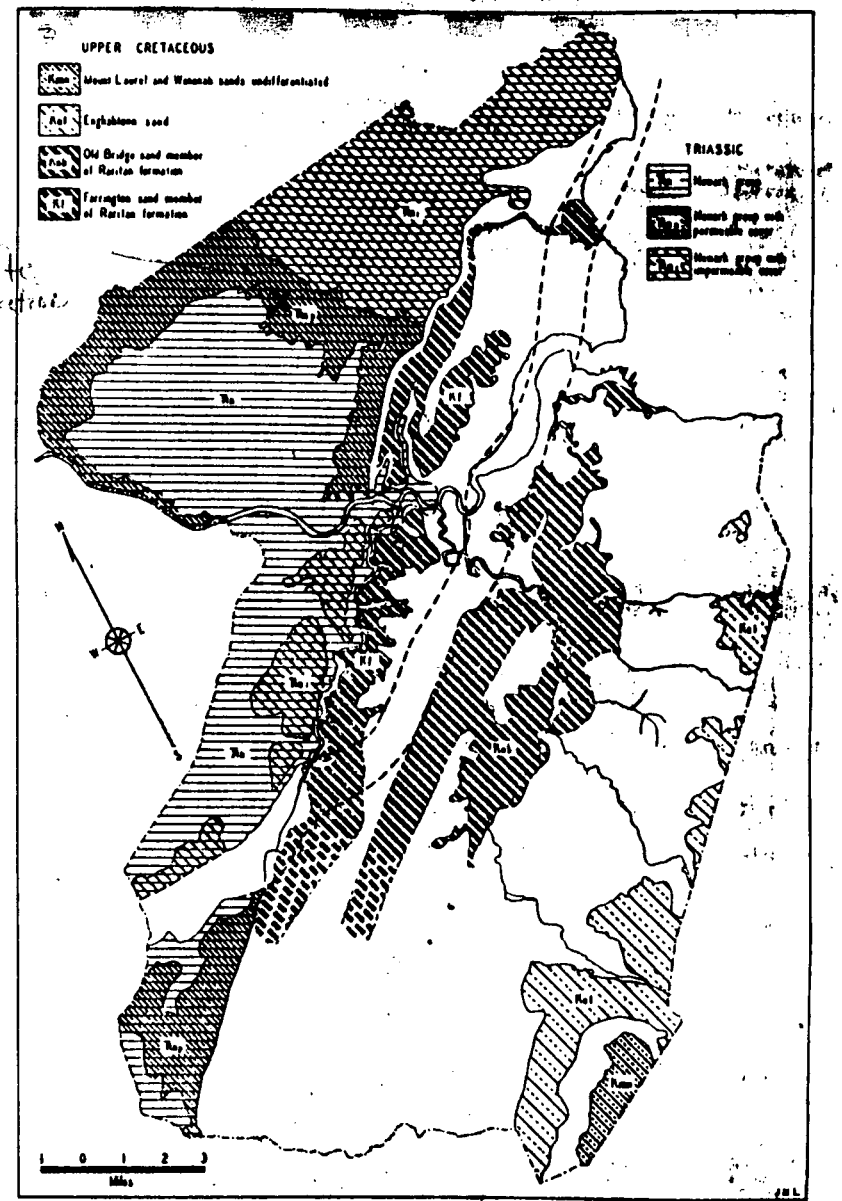


FIGURE 6.—Map of Middlesex County showing the intake areas of the important aquifers. Large quantities of good water are obtained from the Old Bridge and Farrington sand members of the Raritan formation. Small quantities are obtained from the Englishtown sand and the Mount Laurel and Wenonah sands. The rocks of the Newark group yield moderately large supplies where overlain by permeable materials, but elsewhere their yield is small.

yielding about 30 million gallons daily. The destruction of existing and potential ground-water supplies outside the county might be at least as great.

Another plan for the proposed canal contemplates a sea-level canal. In this case, there would be no locks to even retard the movement of salt water along the canal. The contamination of the ground-water supplies by a sea-level canal would be more rapid and possibly more complete than by the lock canal described above.

RARITAN FIRE-CLAY

The Raritan fire-clay, the lowest of the Cretaceous beds, includes the "Raritan potter's clay" of early reports and is an inconstant, variable member which, at its outcrop near Nixon, Bonhampton, Fords, Keasbey and Milltown, has a thickness ranging from zero to 35 feet. The average thickness probably increases to the southeast as wells at East Brunswick, Old Bridge, Runyon, Parlin and South Amboy have encountered from 27 to 86 feet of blue, brown, gray or red clay at this stratigraphic horizon. Typically, the basal part of the clay has a brick-red color identical in shade with the underlying Triassic red shale from which it was derived. It has this same appearance where exposed in a recent roadcut northwest of Patricks Corner; but there the red clay is only a foot thick and is overlain by gray clay. Near the mouth of Mill Brook, southwest of Nixon, the clay is mixed with sand and gravel, but half a mile to the northeast it is a relatively pure light-gray clay with a reddish tinge and is a little over six feet thick. The same clay is exposed in a pit half a mile south of the point where Lawrence Brook empties into the Raritan River. There its base is concealed, but the exposed portion (7 feet thick) is a gray, "fat" clay of good quality.

TRIASSIC SYSTEM

Newark Group

In the investigations upon which this report is based, the study of the water-bearing properties of the rocks of the Newark group has been less detailed than those of the Old Bridge and Farrington sands. However, the rocks of the Newark group form one of the three most important aquifers in Middlesex County. This is true both because of the large amounts of water developed from them and because of their relatively wide extent. In much of that part of the county underlain by the coastal plain formations, two or more aquifers can be tapped at any given point by increasing the depth of drilling. In the area covered by the Newark group, however, this is not true, because these rocks are very thick and essentially homogeneous, and because they are underlain by no other rocks that are capable of yielding any appreciable quantity of water.

GEOLOGY

As shown on the map on page 20, nearly all of the bed rock in Middlesex County northwest of a line roughly from Plainsboro through Monmouth Junction, Milltown and Woodbridge to Carteret is of Triassic age. The younger Quarternary formations form a relatively thin veneer on portions of the Triassic, particularly in the northern part of the county. South of the line mentioned the Triassic is overlain by Cretaceous deposits, but it has been penetrated by wells at Dunhams Corner, Parlin and South Amboy, and probably by the deep well near the Runyon pumping station.

The Triassic rocks in New Jersey belong to the Newark group which is divided into three formations, all of which are found in Middlesex County. The oldest is the *Stockton formation* which consists of conglomerate and sandstone interbedded with red shale. Next above is the *Lockatong formation* and this consists of hard shale and argillite of various hues. These two formations are found only in a small area between Milltown and Kingston near the southwestern border of the county.. To the east they are covered by the younger Cretaceous rocks. The Stockton and Lockatong formations cannot be well seen or studied in the county, and they are not differentiated on the geologic maps.

The *Brunswick formation* is the youngest of the three formations of the Newark group, and within Middlesex County it crops out in a much greater area than the other two Triassic formations combined. It is a dull red shale interbedded with siltstones and occasional layers of sandstone. When dry it is a dense compact rock but it quickly softens and disintegrates when exposed to weathering.

In Middlesex County all the sedimentary rocks of the Newark group dip to the northwest at angles of 5° to 15°. The formations are rather impermeable except along the numerous cracks which everywhere traverse the beds at high angles to the bedding. Some water may also follow along the bedding planes, although such movement must be very restricted judging from actual experience with wells.

Molten rock was intruded into the Newark group in late Triassic time and in this region it solidified beneath the surface of the ground in the form of steeply dipping dikes and relatively flat sills. The largest of these is a diabase sill which is now exposed to the north in

Hill and the Palisades, to the east on Staten Island, and to the west in Rocky Hill. Between these latter two exposures it is buried beneath a mantle of Cretaceous and Pleistocene sediments, but its position has been determined by the many wells which have encountered it and by geophysical exploration. Since it has an important bearing on the water supply of the region, its location has been shown on the geologic maps. The diabase sill stood as a ridge on the pre-Cretaceous surface and was continuous from Rocky Hill to Bayonne. Between Staten Island and Rocky Hill the surface was downfaulted prior to the deposition of the Cretaceous sediments. The first Cretaceous sediments were deposited on each side of the ridge but not on top of it. With continued deposition sandy material covered the higher slopes and then was deposited across it without a break as shown in figure 3. The Farrington sand is very thin or lacking on top of the buried trap ridge between Perth Amboy and South Amboy, but near the Borough of South River it is continuous across a lower segment of the ridge. Because of these geologic factors water cannot move easily from the intake area of the Farrington sand north of the ridge and near Perth Amboy directly south to the center of pumpage from the sand near Parlin; but near the Borough of South River it probably can and does readily move across the trap ridge to the wells in that area.

The intrusion of this thick diabase sill profoundly affected the adjacent beds of shale, those nearest being altered to a tough, dark, spotted rock as hard as slate but lacking its cleavability. With increasing distance from the contacts the alteration is less and less pronounced, the rock becoming progressively softer and changing in color from dark gray, brown and greenish gray to light gray, purplish red, and finally the typical brick red of the unaltered shale. North of Middlesex County where the sill and adjacent beds are exposed, the latter are altered for a thickness of 500 feet or more from the contacts. In this region similar altered beds may be seen in a gully west of Patricks Corner, which is more than half a mile distant from the nearest outcrop of diabase but which is unquestionably underlain by that rock at a depth of a few hundred feet; and near the mouth of Mill Brook, two miles northwest of Sayreville, where the nearest exposure of diabase is a small dike more than a mile distant. Metamorphosed or altered shale has also been encountered by wells drilled in Milltown, Keasbey, Perth Amboy and Woodbridge, and by two boreholes respectively two miles east-southeast of Plainsboro and two miles east-northeast of Dayton.

PHYSICAL PROPERTIES

The facts that the materials composing the rocks of the Newark group are usually fine-grained and relatively impermeable and that the formations are water-bearing by virtue of the cracks and crevices in the rocks, introduce special problems in any attempt to appraise their water-bearing capacity. Laboratory tests of ordinary samples of material collected in the field would be of no particular value, because they must of necessity deal with fragments of the rock and cannot indicate the capacity of the cracks between the undisturbed fragments as found in nature. Pumping tests provide the best means of studying the capacity of the group to yield water but very few have been made.

The permeability and the specific yield of the Newark group depend upon the degree of cracking. Since the degree of cracking decreases with the depth, the permeability and specific yield of the rocks also decrease with the depth. An advantage of pumping tests is that their results represent a composite of the conditions from top to bottom of the water-bearing part of the formation. The results of a pumping test may be directly expressed as a coefficient of transmissibility and a coefficient of storage. The coefficient of transmissibility is a measure of the ability of the formation to transmit water. It is the product of the average coefficient of permeability and the depth of the saturated portion of the aquifer. Under water-table conditions the coefficient of storage as determined in a pumping test is essentially the same as the average specific yield of the material. The cracks in the rocks of the Newark group intersect one another at many different angles with the result that the water in the rocks can generally move in any direction and is essentially under water-table conditions. Thus, without actually determining the effective depth of cracking of the aquifer or its characteristics at any given depth, it is possible by pumping tests to determine coefficients that are accurate indices of its capacity to store and transmit water.

Early in 1943 an opportunity arose to conduct a pumping test on some wells drawing from the rocks of the Newark group at Kenilworth, New Jersey, which is in Union County, about four or five miles north of the Middlesex County line at Rahway. At the site of the test the rocks of the Newark group were covered by a relatively permeable phase of the glacial till to a thickness of perhaps 30 or 40 feet. The results of the pumping test no doubt combine the characteristics of both the rock and the overlying materials to some extent. However, they are probably more representative of conditions in the shale than of those

in the overlying till. The results of the pumping tests at Kenilworth indicate that the coefficient of transmissibility of the rocks at that location is about 25,000 and that the coefficient of storage is about 0.0044.

The results of a single test cannot be considered representative of the whole Newark group. Nevertheless, they furnish a basis for an interesting comparison of the group with the aquifers of the coastal plain formations. The Farrington sand, for example, is about 80 feet thick and has an average coefficient of permeability of at least 1,200. Its coefficient of transmissibility would be the product of its thickness and its coefficient of permeability or at least 96,000. This means that the Farrington sand could transmit four or five times as much water as the rocks of the Newark group under a given head and through a given width of section.

The difference in the capacity of the two aquifers to store water is even more striking. It was estimated that a block of the Farrington sand one square mile in area and one foot thick could store about 67 million gallons of available water. If the sand is 80 feet thick, one square mile of it would store about 5,360 million gallons. If the thickness of the water-bearing part of the Newark group is assumed to be 300 feet and its specific yield 0.0044, one square mile of this aquifer could store only about 275 million gallons. Of course where there are overlying permeable sandy deposits, substantial additional quantities of water stored in these deposits, may be available to wells tapping the rocks. The low storage capacity of the rocks helps to explain the high rate of runoff and low ground-water flows observed on streams draining areas underlain by the Newark group where there is no permeable covering.

QUALITY OF WATER

With the exception of the waters that are contaminated by the intrusion of sea water, the water from the Triassic shales and sandstones of the Newark group is more highly mineralized than any other ground water obtained in Middlesex County. A majority of the wells tapping these rocks yield good water containing less than 200 or 300 parts per million of total solids, but it is not unusual to find several hundred parts per million of dissolved solids. The water is high in calcium and magnesium and the hardness is therefore high. The sulphates are high as compared with the carbonates and bicarbonates and much of the hardness is therefore noncarbonate or "permanent" hardness. In the water from one industrial well used for cooling, the total hardness expressed as calcium carbonate was reported to be 900 parts per million. Very often the waters from these formations also contain objectionable quantities of iron. The chlorides are usually fairly low.

The quality of the water from the Newark group varies from place to place and from one bed to another. The Stockton formation usually yields very good water. Water from the Brunswick shale, on the other hand, is sometimes more highly mineralized. In general, it may be said that where the beds yield water most freely its quality is likely to be better than in those localities where the crevices in the rock are small and the yield is low. Perhaps the greater circulation of meteoric waters through the more permeable beds has removed some of the objectionable soluble materials that have been retained in the less permeable rocks. The fact that better water is generally encountered near the surface than at greater depths tends to confirm this idea.

DEVELOPMENT AND PUMPAGE

A great many wells have been drilled into the Newark group in Middlesex County. The vast majority of them have produced some water. In fact, one reason for the importance of this group of rocks as an aquifer is that they will generally yield at least a small quantity of water to a well in almost any locality where they are encountered. Numerous small wells have been drilled in these rocks for domestic and farmstead water supplies, and most of them have been satisfactory for this purpose. The yield of these wells ranges from a few gallons per minute to 100 gallons per minute or more.

A considerable number of wells have also been drilled into these rocks for municipal or industrial water supplies. Where conditions are most favorable such wells may yield from 100 to 500 gallons per minute, or even more, but very high yields are exceptional. With one or two exceptions the larger developments tapping this aquifer within Middlesex County yield less than 500,000 gallons daily, but there are several well fields yielding water supplies ranging from 100,000 to 500,000 gallons daily or more, and a considerable number that produce 25,000 to 100,000 gallons daily.

A total of approximately 9.6 million gallons a day was withdrawn from the aquifers of the Newark group in Middlesex County in 1941 for municipal and industrial use. About 8.5 million gallons a day or 89 percent of the total was withdrawn from wells in the municipalities north of the Raritan River. Nearly 6.5 million gallons a day or 68 percent of the total was pumped from wells in the Borough of South Plainfield, practically all from wells owned by the Middlesex Water

REFERENCE NO. 15

Uncontrolled Hazardous Waste Site Ranking System

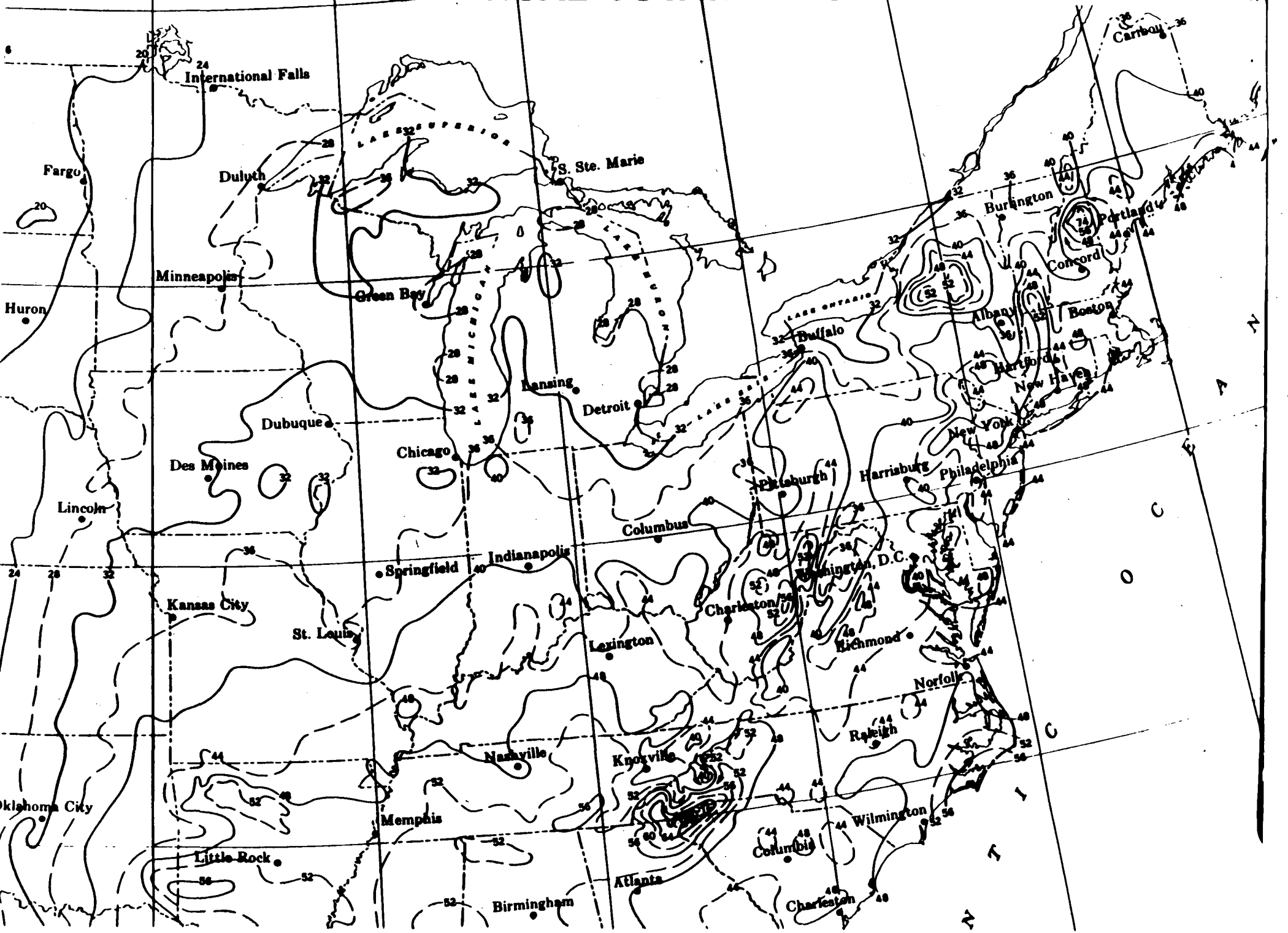
A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

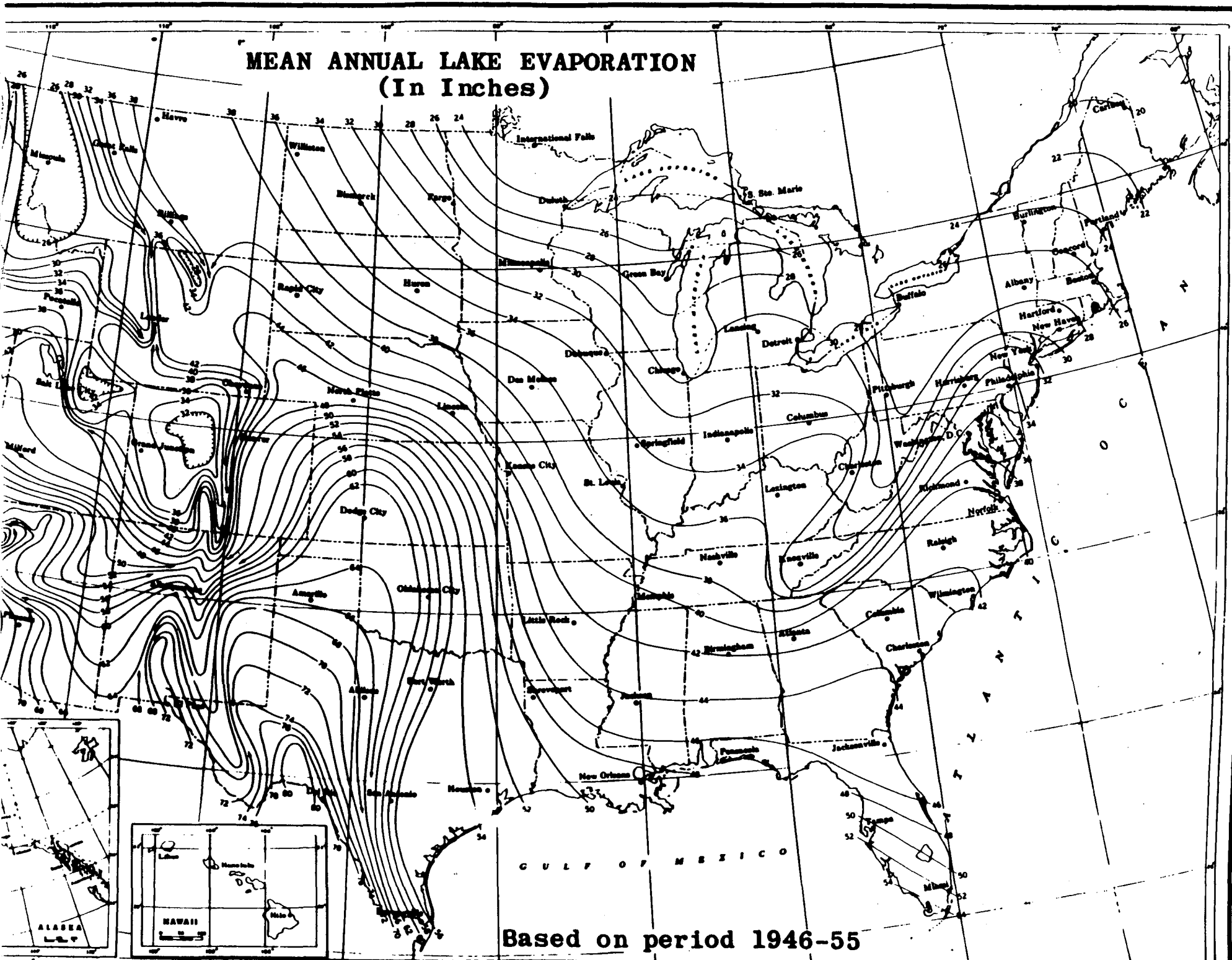
United States
Environmental Protection
Agency

1984

NORMAL ANNUAL TOTAL PRECIPITATION (Inches)

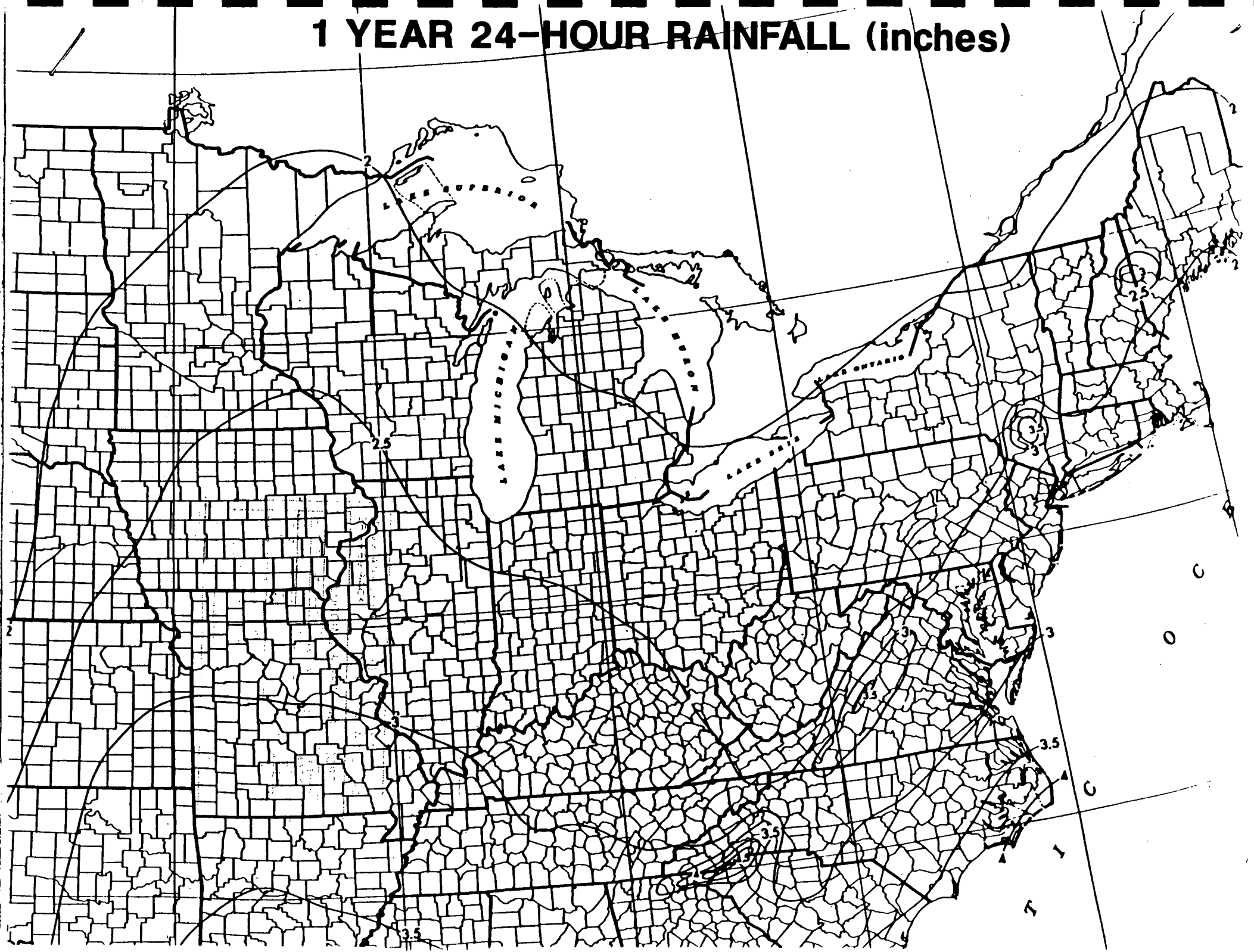


MEAN ANNUAL LAKE EVAPORATION
(In Inches)



Based on period 1946-55

1 YEAR 24-HOUR RAINFALL (inches)



PERMEABILITY

TABLE 2

PERMEABILITY OF GEOLOGIC MATERIALS*

Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWest ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

REFERENCE NO. 16

SELECTED INFORMATION OF WELLS IN THE GROUND WATER SITE INVENTORY DATABASE
MIDDLESEX COUNTY

USGS UNIQUE ID	ALTITUD	METH ALT MEAS	ALTI-TUDE ACC	WATER LEVEL	DATE LEVEL MEASURED	PRODU-TION LEVEL	DISCHARG	DEPTH FIRST OPENING	BOTTOM LAST OPENING	MIN OPEN DIA	OPEN-ING LENGT	TYPE OPEN -ING	TYPE OPEN MAT	BEDROCK DEPTH	BEDROCK MATERIAL	DEPTH DRILLER LOG
230302	115.00	M	10.00	27.00	04/14/1955	106.00	465.00	170.00	200.00	10.0	30.0	S		0.00		210.00
230303	125.00	M	10.00	53.00	06/12/1957	98.00	1050.00	197.00	227.00	10.0	30.0	S		0.00		227.00
230304	127.00	L	1.00	50.00	01/05/1982	110.00	785.00	198.00	222.00	12.0	30.0	S		0.00		222.00
230305	127.00	L	1.00	55.00	03/14/1957	75.00	698.00	205.00	225.00	8.0	20.0	S		0.00		225.00
230306	120.00		0.00	45.00	12/01/1969	0.00	0.00	201.00	207.00	6.0	6.0	S		0.00		207.00
230307	120.00	M	10.00	0.00	/ /	0.00	150.00	100.00	120.00	8.0	20.0	S		0.00		0.00
230308	125.40	L	0.10	44.68	05/11/1976	0.00	0.00	51.00	71.00	0.0	20.0	S	P	0.00		71.00
230309	122.20	L	0.10	46.44	05/11/1976	0.00	0.00	61.00	81.00	0.0	20.0	S	P	0.00		81.00
230310	116.0	P	5.00	35.00	12/09/1981	40.00	205.00	79.00	79.00	6.0	10.0	S		0.00		87.00
230311	110.00	A	5.00	30.00	01/12/1957	40.00	12.00	104.00	107.00	4.0	3.0	S		0.00		108.00
230312	120.00	M	20.00	32.00	12/19/1966	0.00	0.00	72.00	77.00	2.0	5.0	S		0.00		86.00
230313	120.00	M	20.00	32.00	/ /	0.00	0.00	72.00	77.00	2.0	5.0	S		0.00		83.00
230314	120.00	M	20.00	0.00	/ /	0.00	0.00	0.00	0.00	0.0	0.0			0.00		77.00
230315	108.20	L	0.10	20.00	08/03/1971	84.00	1200.00	103.00	138.00	12.0	35.0	S		0.00		142.00
230316	120.20	M	10.00	30.00	08/01/1972	0.00	0.00	0.00	0.00	0.0	0.0			0.00		0.00
230317	109.70	L	0.10	30.49	05/11/1976	0.00	0.00	51.00	71.00	0.0	20.0	S	P	0.00		71.00
230318	120.00	M	10.00	31.00	08/01/1972	0.00	0.00	0.00	0.00	0.0	0.0			0.00		0.00
230319	92.80	L	0.10	39.00	12/03/1963	66.00	1200.00	110.00	135.00	12.0	25.0	S	R	0.00		0.00
230320	100.00	M	20.00	39.00	11/25/1982	68.00	515.00	162.00	182.00	10.0	20.0	S		0.00		182.00
230322	122.00	L	0.10	9.00	10/28/1963	46.00	1200.00	95.42	115.42	12.0	20.0	S	R	0.00		142.00
230323	100.00	M	20.00	50.00	03/22/1966	55.00	30.00	154.00	164.00	6.0	10.0	S		0.00		0.00
230325	111.00	A	5.00	24.00	11/20/1963	34.00	200.00	101.00	116.00	10.0	15.0	S		0.00		145.00
230326	98.00	A	5.00	12.00	01/15/1957	25.00	25.00	46.00	49.00	4.0	3.0	S		0.00		50.00
230327	85.00	M	20.00	10.00	10/06/1959	18.00	60.00	29.00	39.00	10.0	10.0	S		0.00		41.00
230328	130.00	M	10.00	60.00	04/02/1973	70.00	10.00	86.00	96.00	4.0	10.0	S		0.00		100.00
230329	115.00	M	10.00	48.00	05/25/1955	74.00	500.00	215.00	248.00	10.0	33.0	S		0.00		0.00
230330	115.01	M	10.00	0.00	/ /	0.00	0.00	176.00	206.00	10.0	30.0	S		0.00		210.00
230331	110.00	M	10.00	0.00	/ /	0.00	0.00	0.00	0.00	0.0	0.0			0.00		0.00
230332	105.00	M	10.00	48.00	06/27/1959	100.00	650.00	178.00	208.00	10.0	30.0	S		0.00		240.00
230333	107.01		0.00	27.00	06/18/1955	30.00	12.00	45.00	49.00	4.0	4.0	S		0.00		50.00
230334	0.00		0.00	0.00	/ /	0.00	0.00	0.00	0.00	0.0	0.0			0.00		0.00
230335	70.00	M	20.00	40.00	10/29/1965	265.00	450.00	77.00	350.00	12.0	273.0	S		0.00		0.00
230336	75.00	M	20.00	53.00	10/14/1964	120.00	510.00	110.00	500.00	12.0	390.0	S		0.00		500.00
230337	75.00	M	20.00	31.00	05/01/1964	113.00	325.00	97.00	500.00	12.0	403.0	S		0.00		500.00
230338	75.00	M	20.00	42.00	06/01/1964	116.00	730.00	109.00	500.00	12.0	391.0	S		0.00		500.00
230339	75.00	M	20.00	34.00	11/19/1965	141.00	250.00	88.00	501.00	12.0	413.0	S		0.00		501.00
230340	75.00	M	20.00	49.00	09/16/1964	127.00	450.00	0.00	0.00	0.0	0.0			0.00		500.00
230341	10.00	L	0.10	5.00	11/01/1968	12.00	30.00	26.00	29.00	6.0	3.0	S		0.00	SAND	0.00
230342	10.00		0.00	3.00	06/14/1968	17.00	28.00	33.00	36.00	6.0	3.0	S		0.00	SAND	0.00
230343	17.00	L	0.10	18.00	06/01/1968	31.00	21.00	36.00	39.00	6.0	3.0	S		0.00	SAND	0.00
230344	22.19		0.00	11.00	10/01/1968	0.00	0.00	31.00	37.00	6.0	6.0	S		0.00		0.00
230345	30.00	M	10.00	23.00	10/11/1965	59.00	200.00	63.00	83.00	12.0	20.0	S		0.00		90.00
230346	27.00	L	1.00	9.00	09/08/1958	69.00	1000.00	71.00	81.00	12.0	10.0	S		0.00		0.00

CWSI

UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230043		4 OBS	EAST BRUNSWICK TWP	402421	0742525	105.00	201		402421074252502	211FRNG	195.00	200.00	U	Z				230043
230044	E BRUNSWICK TWD	TEST 6-75	EAST BRUNSWICK TWP	402416	0742453	130.00	281		402422074254501	211MRPA	217.00	237.00	U	Z	197509		319	230044
230044		TEST 6-75	EAST BRUNSWICK TWP	402416	0742453	130.00	281		402422074254501	211MRPA	271.00	281.00	U	Z			319	230044
230045	METAL DECK INC	RETURN WELL	EAST BRUNSWICK TWP	402426	0742515	110.00	233		402426074251501	211FRNG	203.00	233.00	N	W	19690326			230045
230045	POLYSAR RUBBER SERV	RETURN WELL	EAST BRUNSWICK TWP	402426	0742515	110.00	233		402426074251501	211FRNG			N	W				230045
230046	METAL DECK INC	PUMPING WELL	EAST BRUNSWICK TWP	402427	0742507	100.00	230		402427074251201	211FRNG	200.00	230.00	N	W	19681202			230046
230046	POLYSAR RUBBER SERV	PUMPING WELL	EAST BRUNSWICK TWP	402427	0742507	100.00	230		402427074251201	211FRNG			N	W				230046
230047	E BRUNSWICK TWD	TEST 7-75	EAST BRUNSWICK TWP	402430	0742553	95.00	144		402430074255301	211MRPA	119.33	144.00	U	T	19751016		201	230047
230047		TEST 7-75	EAST BRUNSWICK TWP	402430	0742553	95.00	144		402430074255301	211MRPA	119.00	144.00	U	Z			201	230047
230048	ANHEUSER BUSCH	1-1931	EAST BRUNSWICK TWP	402431	0742214	30.00	259		402431074221401	211FRNG	223.00	243.00	U	Z	1931			230048
230048		1-1931	EAST BRUNSWICK TWP	402431	0742214	30.00	259		402431074221401	211FRNG	249.00	260.00	U	Z				230048
230049	ANHEUSER BUSCH	2 1931	EAST BRUNSWICK TWP	402431	0742214	30.00	65.0		402431074221402	211ODBG	42.00	62.00	U	Z			70.0	230049
230049		2 1931	EAST BRUNSWICK TWP	402431	0742214	30.00	65.0		402431074221402	211ODBG	45.00	65.00	U	Z			70.0	230049
230050	ANHEUSER BUSCH	BUSCH 5	EAST BRUNSWICK TWP	402432	0742212	37.00	267		402432074221201	211FRNG	215.00	265.00	N	W	19630615	28-04657		230050
230051	ANHEUSER BUSCH	BUSCH 6	EAST BRUNSWICK TWP	402432	0742212	37.00	71.0		402432074221202	211ODBG	51.00	71.00	N	W	19731011	28-08209		230051
230052	ANHEUSER BUSCH	OBS FOR 6	EAST BRUNSWICK TWP	402432	0742212	37.00	64.0		402432074221203	211ODBG	59.00	64.00	U	D	19731011			230052
230053	ANHEUSER BUSCH	BUSCH 4	EAST BRUNSWICK TWP	402432	0742218	30.00	70.0		402432074221801	211ODBG	55.00	70.00	U	Z	19571023	28-02587		230053
230054	ANHEUSER BUSCH	BUSCH 3	EAST BRUNSWICK TWP	402432	0742219	30.00	72.0		402432074221901	211ODBG	57.00	72.00	N	W	19480729	48-00001		230054
230055	E BRUNSWICK TWD	TEST 3	EAST BRUNSWICK TWP	402435	0742540	103.00	178		402435074254001	211FRNG			U	T	1969			230055
230056	E BRUNSWICK TWD	TEST 2	EAST BRUNSWICK TWP	402437	0742535	97.00	175		402437074253501	211FRNG			U	T				230056
230057	CIAK BROS	COLONIAL OAKS	EAST BRUNSWICK TWP	402441	0742448	122.00	241		402441074244801	211FRNG	216.00	241.00	U	U	19540506			230057
230057	E BRUNSWICK TWD	COLONIAL OAKS	EAST BRUNSWICK TWP	402441	0742448	122.00	241		402441074244801	211FRNG			U	U				230057
230058	MIDDLESEX W C	TAMARACK 1-75	EAST BRUNSWICK TWP	402448	0742700	108.00	107		402448074270001	211FRNG	87.00	107.00	I	W	19750507			230058
230059	E BRUNSWICK TWD	EBTWD 2	EAST BRUNSWICK TWP	402456	0742442	122.00	220	0.00	402456074244201	211FRNG	180.00	220.00	P	W	19550407		220	230059
230060	NJ TURNPIKE AU	BN-3	EAST BRUNSWICK TWP	402459	0742643	110.00	110		402459074264301	211FRNG	90.00	110.00	U	U	19520510			230060
230061	NJ TURNPIKE AU	BN-1	EAST BRUNSWICK TWP	402500	0742638	120.00	109		402500074263801	211FRNG	99.00	109.00	U	Z	19510508			230061
230062	NJ TURNPIKE AU	BN-2	EAST BRUNSWICK TWP	402500	0742642	115.00	120		402500074264201	211FRNG	110.00	120.00	U	U	19510518			230062
230063	E BRUNSWICK TWD	EBTWD 1	EAST BRUNSWICK TWP	402501	0742443	110.00	222	0.00	402501074244301	211FRNG	181.50	181.50	P	W	19510816		225	230063
230064	BEECHER OBS	E BRUNSWICK TWP	EAST BRUNSWICK TWP	402503	0742812	85.00	40.0	5.00	402503074281201	211FRNG	35.00	40.00	U	U	19740728		42.0	230064
230065	E BRUNSWICK TWD	1-69	EAST BRUNSWICK TWP	402520	0742609	114.00	152		402520074260901	211FRNG	140.00	150.00	U	Z	19690903			230065
230066	COLLINS, EDWARD	COLLINS	EAST BRUNSWICK TWP	402516	0742408	140	223		402527074241101	211FRNG	198.00	223.00	I	W	19540314			230066
230067	BAIRD, L	1	EAST BRUNSWICK TWP	402531	0742823	97.00	58.0		402531074282301	211FRNG	52.00	57.00	U	Z	19550728	28-03548		230067
230068	SOUTH RIVER BORO	S RIVER 1	EAST BRUNSWICK TWP	402555	0742136	20.00	198		402549074213401	211FRNG	189.00	198.00	U	Z	1966			230068
230069	C P S CHEMICAL	C P S 1-1975	OLD BRIDGE TWP	402609	0741940	25.0	68.0		402552074203001	211ODBG	56.00	66.00	N	W	19750523	29-08130	71.0	230069
230070	FISCHER, ROBERT	FISCHER	EAST BRUNSWICK TWP	402555	0742719	73.00	21.0		402553074271701	211FRNG	0.00	21.00	U	D	1936			230070
230071	SMITH, LAWRENCE	SMITH 1	SOUTH BRUNSWICK TWP	402237	0742830	90.00	172		402435074240201	211FRNG	154.00	172.00	U	Z	19510203			230071
230072	SMITH, LAWRENCE	SMITH 2-1972	EAST BRUNSWICK TWP	402435	0742402	80.00	130		402435074240202	211FRNG	120.00	130.00	Z	W	19720301		149.5	230072
230073	CARY CHEMICAL	1 PREM PLASTIC	EAST BRUNSWICK TWP	402649	0742524	80.00	92.0		402649074252401	211FRNG	72.00	82.00	N	W	19560221			230073
230073	PREMIUM PLASTICS	1 PREM PLASTIC	EAST BRUNSWICK TWP	402649	0742524	80.00	82.0		402649074252401	211FRNG			N	W				230073
230073	PREMIUM PLASTIC	1 PREM PLASTIC	EAST BRUNSWICK TWP	402649	0742524	80.00	82.0		402649074252401	211FRNG			N	W				230073
230074	GREAT BAY CHEM	RINBRAND 1	EAST BRUNSWICK TWP	402650	0742523		177		402650074252301	211FRNG			N	W	1961			230074
230075	HERBERT SAND CO	HSC 2 INCH	EAST BRUNSWICK TWP	402752	0742309	3.00			402752074231101	211FRNG	49.00	52.00	U	U				230075
230076	HERBERT SAND CO	HSC	EAST BRUNSWICK TWP	402754	0742320	10.00	32.0		402754074232001	211MRPA			U	T				230076
230077	HERBERT SAND CO	HSC 2	EAST BRUNSWICK TWP	402755	0742300	6.00	35.0		402755074230001	211FRNG	32.00	35.00	U	Z	1964			230077
230078	HERBERT SAND CO	HSC	EAST BRUNSWICK TWP	402755	0742310	5.00	32.0		402755074231001	211MRPA			U	T				230078
230079	HERBERT SAND CO	HSC 1	EAST BRUNSWICK TWP	402807	0742302	8.00	68.0		402807074230201	211MRPA			U	Z	1964			230079
230080	HERBERT SAND CO	RANNEY WELL	EAST BRUNSWICK TWP	402807	0742351	28.00	118.0		402807074235101	211FRNG			F	W				230080
230081	JEFIMOWICZ, LEO	1	EAST BRUNSWICK TWP	402819	0742402	50.00	110		402819074240201	231BRCK	51.00	110.00	H	W	19541015			230081
230082	TOMPKINS, R	1(BORGESE,J)	EAST BRUNSWICK TWP	402836	0742404	40.00	109		402836074240401	231BRCK	64.00	109.00	I	W	19550103			230082
230082	BORGESE, J	1(BORGESE,J)	EAST BRUNSWICK TWP	402836	0742404	40.00	109		402836074240401	231BRCK			I	W				230082
230083	TENNECO CHEM	3(NIXON NITRT)	EDISON TWP	402949	0742200	30.00	100		402949074220001	211FRNG			N	W	1913			230083
230084	TENNECO CHEM	1(NIXON NITRT)	EDISON TWP	402955	0742210	50.00	100		402955074221001	211FRNG			N	W	1913			230084
230085	TENNECO CHEM	2(NIXON NITRT)	EDISON TWP	402955	0742210	50.00	100		402955074221002	211FRNG			N	W	1913			230085
230086	ALCOA	EDISON WRKS 04	EDISON TWP	403127	0742048		26.0		403127074204801	211FRNG				D	19591125			230086
230087	ALCOA	EDISON WRKS 03	EDISON TWP	403127	0742050		26.0		403127074205001	211FRNG				D	19591125			230087
230088	ALCOA	EDISON WRKS P2	EDISON TWP	403128	0742049	71.00	29.0		403128074204901	211FRNG			N	W	1960			230088
230088	AMERICAN CAN CO	EDISON WRKS P2	EDISON TWP	403128	0742049	71.00	29.0		403128074204901	211FRNG			N	W				230088
230089	ALCOA	EDISON WRKS P1	EDISON TWP	403128	0742051	70.00	26.0		403128074205101	211FRNG			N	W	19591130			230089
230090	ALCOA	EDISON WRKS P3	EDISON TWP	403130	0742046	72.00	30.0		403130074204601	211FRNG			N	W	1960			230090
230091	ALCOA	EDISON WRKS 02	EDISON TWP	403130	0742052		26.0		403130074205201	211FRNG				D	19591125			230091
230092	AM ALUMINUM CO	EDISON WRKS 01	EDISON TWP	403132	0742053		28.0		403132074205301	211FRNG				D	19591125			230092
230092	AMERICAN CAN CO	EDISON WRKS 01	EDISON TWP	403132	0742053		28.0		403132074205301	211FRNG				D				230092
230093	EDISON ASPHALT	EAG-2	EDISON TWP	403253	0742345	90.00	301		403253074234501	231BRCK	26.00	301.00	N	W	19650617			230093
230094	HELMETTA WC	5-1962 (OLD#2)	HELMETTA BORO	402239	0742530	60.00	198		402239074253001	211FRNG	183.00	193.00	N	W	1962			230094
230095	HELMETTA WC	4-1960 (OLD#1)	HELMETTA BORO	402239	0742540	40.00	39.0		402239074254001	211ODBG	34.00	39.00	U	Z	1960			230095
230096	HELMETTA WC	6(4-R)	HELMETTA BORO	402236	0742535	40.00	42.0		402239074254002	211ODBG	32.00	42.00	P	W	19720619			230096
230097	DUHERNAL W CO	DUHRNL OBS 49F	HELMETTA BORO	402247	0742503	39.00	307	0.00	402247074250301	211FRNG	236.00	243.00	U	D	19460417		375	230097
230097		DUHRNL OBS 49F	HELMETTA BORO	402247	0742503	39.00	307		402247074250301	211FRNG	296.00	301.00	U	D			375	230097
230098	NJ WATER CO	JAMESBURG 6	JAMESBURG BORO	402051	0742604	50.00	120		402051074260401	211ODBG	99.00	120.00	P	W	19541006	28-01426		230098
230099	NJ WATER CO	JAMESBURG 1927	JAMESBURG BORO	402051	0742604	45.00	128		402051074260402	211ODBG	116.00	128.00	U	Z	1927			230099
230100	NJ WATER CO	JAMESBURG 7	JAMESBURG BORO	402053	0742603	45.00	129		402053074260301	211ODBG	118.00	129.00	P	W	19550720	28-01612		230100
230101	MOLDER FISH	1973	OLD BRIDGE TWP	402030	0742115	50.00	216		402030074211501	211ODBG	211.00	223.00	H	W	1973			230101
230102	TONKIN, DONALD	1971	OLD BRIDGE TWP	402129	0742119	70.00	91.0		402052074212401	211ODBG	90.00	96.00	H	W	1971			230102
230103	B&D LIQUID BULK	1972	OLD BRIDGE TWP	402159	0742118	85.00	116		402142074211501	211ODBG	109.00	116.00	H	W	1972			230103
230104	OLYMPIA & YORK BRIDGE DEV	MORREL	OLD BRIDGE TWP	402143	0741849	76.75	117		402143074185201	211EGLS	0	11	U	D	1923		11	230104
230105	DORSI, DOMINIC	1969	OLD BRIDGE TWP	402204	0742122	90.00	73.0		402204074212201	211EGLB	67.00	73.00	H	W	1969			230105
230106	DUHERNAL W CO	DUHERNL OBS 32	OLD BRIDGE TWP	402251	0742248		132		402251074224801	211MRPA			U	D	1944			230106
230107	DUHERNAL W CO	DUHRNL OBS 54F	OLD BRIDGE TWP	402252	0742246	28.00	334		402252074224601	211FRNG	311.00	318.00	U	D	1946			230107
230107		DUHRNL OBS 54F	OLD BRIDGE TWP	402252	0742246	28.00	334		402252074224601	211FRNG	327.00	334.00	U	D				230107
230108	DUHERNAL W CO	DUHERNAL 13	OLD BRIDGE TWP	402253	0742247	25.00	107		402253074224701	211ODBG	87.00	107.00	N	W	1947			230108
230109	DUHERNAL W CO	DUHERNL OBS 26	OLD BRIDGE TWP	402302	0742256	23.55	101		402302074225601	211ODBG			U	D	1942			230109
230110	DUHERNAL W CO	DUHERNAL 11	OLD BRIDGE TWP	402308	0742252	20.00	97.0		402308074225201	211ODBG	77.00	97.00	N	W	1942			230110
230111	DUHERNAL W CO	DUHERNL OBS 52	OLD BRIDGE TWP	402309	0742252	20.00	89.0		402309074225201	211ODBG	84.00	89.00	U	D	1954			230111
230112	DUHERNAL W CO	DUHERNL OBS 70	OLD BRIDGE TWP	402316	0742235	20.00	9.0		402316074223501	211ODBG			U	D	1956			230112
230113	DUHERNAL W CO	DUHERNAL 10	OLD BRIDGE TWP	402318	0742250	20.00	94.0		402318074225001	211ODBG	79.00	94.00	N	W	1965			230113
230114	DUHERNAL W CO	DUHRNL OBS 52F	OLD BRIDGE TWP	402319	0742246	26.00	237		402319074224601	211FRNG	225.00	237.00	U	D	1945			230114
230115	DUHERNAL W CO	DUHERNL OBS 7	OLD BRIDGE TWP	402320	0742249		106		402319074304801	211MRPA			U	D	1938			230115
230116	DUHERNAL W CO	DUHERNAL 20	OLD BRIDGE TWP	402323	0742245	20.00	99.0		402323074224501	211ODBG	84.00	99.00	N	W	1953			230116
230117	DUHERNAL W CO	DUHERNL OBS 38	OLD BRIDGE TWP	402325	0742259		100		402325074225901	211MRPA			U	D	1947			230117
230118	DUHERNAL W CO	DUHERNL OBS 3	OLD BRIDGE TWP	402326	0742157		52.0		402326074215701	211MRPA	41.00	52.00	U	D	1938			230118

UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL		W S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230206	OLD BRIDGE MUA	LAWRENCE HAR 9	OLD BRIDGE TWP	402700	0741454	60.00	395		402700074145902	211FRNG	360.00	395.00	P W	19530819			230206
230207	SHOP-RITE STORE	PATHMARK	OLD BRIDGE TWP	402705	0741745	130.00	220		402705074174501	211ODBG			U U	1963			230207
230208	OLD BRIDGE MUA	1-HOPE PK	OLD BRIDGE TWP	402712	0741806	140.00	181		402712074180601	211ODBG	167.00	181.00	U U	19560529		181	230208
230209	PREMIUM PLASTICS	2 PREM PLASTIC	METUCHEN BORO	403254	0742234	80.00	161		403254074223401	231BRCK	72.00	161.00	N W	19690415			230209
230210	APT-TO-ACRES	1971	MONROE TWP	401738	0742428	80.00	260		401738074242801	211EGLS	250.00	260.00	H W	1971			230210
230211	VLCEJ, STEPHEN	1972	MONROE TWP	401819	0742248	105.00	49.0		401819074224801	211EGLS	43.00	49.00	H W	19720530			230211
230212	D'ALBERO, ANTHNY	1966	MONROE TWP	401840	0742242	180.00	90.0		401840074224201	211EGLS	84.00	90.00	H W	19661011			230212
230213	BARATTA, CARL	1-1968	MONROE TWP	401847	0742345	100.00	198		401847074234501	211ODBG	195.00	198.00	H W	1968			230213
230214	BARATTA, CARL	2-1968	MONROE TWP	401847	0742345	100.00	198		401847074234502	211ODBG	195.00	198.00	H W	1968			230214
230215	REALTY TRNSFR C	1971	MONROE TWP	401902	0742602		180		401902074260201	211ODBG	175.00	180.00	H W	19710126			230215
230216	COLLURA, PAUL	1972	MONROE TWP	401904	0742435		120		401904074243501	211ODBG	115.00	120.00	H W	1972			230216
230217	ROSENBLUM, ARON	1972	MONROE TWP	401942	0742150	55.00	147		401912074214701	211ODBG	137.00	147.00	H W	19720506			230217
230217	MORDSE, GEORGE	1972	MONROE TWP	401942	0742150	55.00	147		401912074214701	211ODBG			H W				230217
230218	KOPPEL, JUDITH	1968	MONROE TWP	401925	0742439	130.00	176		401925074243901	211ODBG	173.00	177.00	H W	19680422			230218
230219	FORSGATE W C	8-R	MONROE TWP	401925	0742620	167.00	329		401925074262001	211ODBG	287.00	325.00	U Z	1952			230219
230219	MONROE TWP MUA	8-R	MONROE TWP	401925	0742620	167.00	329		401925074262001	211ODBG	292.00	322.00	U Z				230219
230220	FOCARINO, BARNEY	1955	MONROE TWP	401939	0742430	160.00	217		401939074243001	211ODBG	214.00	217.00	U U	19551221			230220
230221	PAPROCKY, PETER	1954	MONROE TWP	401950	0742606	150.00	179		401950074260601	211ODBG	175.00	179.00	H W	19540610			230221
230222	FORSGATE W C	FORSGATE 5	MONROE TWP	401952	0742805	130.00	202		401953074280201	211ODBG	182.00	202.00	P W	195406			230222
230222	MONROE TWP MUA	FORSGATE 5	MONROE TWP	401952	0742805	130.00	202		401953074280201	211ODBG			P W				230222
230223	DEMARCO, EDWARD	1970	MONROE TWP	402000	0742423	110.00	225		402000074242301	211ODBG	220.00	225.00	H W	1970			230223
230224	JACOBSEN,	1972	MONROE TWP	402003	0742459	135.00	180		402003074245901	211ODBG	170.00	180.00	I W	1972			230224
230225	INDYK, JOSEPH S	MONROE TWP	MONROE TWP	402011	0742231	65.00	240		402011074223101	211ODBG	236.00	240.00	H W	19510130			230225
230226	CITIES SERVICE CO	2	MONROE TWP	402013	0742834	132.00	364		402013074283401	211FRNG	330.00	364.00	N W	19670825	28-06144		230226
230226	GENERAL FOODS	2	MONROE TWP	402013	0742834	132.00	364		402013074283401	211FRNG			N W				230226
230227	CITIES SERVICE CO	3	MONROE TWP	402012	0742833	132	198		402013074283402	211ODBG	168.00	198.00	N W	19671009	28-06234		230227
230227	GENERAL FOODS	3	MONROE TWP	402012	0742833	132	198		402013074283402	211ODBG			N W				230227
230228	MONROE TWP MUA	OBS 3-1961	MONROE TWP	402015	0742757	147.34	138		402015074275701	211ODBG	128.00	138.00	U O	1961			230228
230229	MONROE TWP MUA	OBS 4-1961	MONROE TWP	402015	0742757	147.34	330		402015074275702	211FRNG	319.00	330.00	U O	1961			230229
230230	FARINO BROS	1	MONROE TWP	402012	0742703	155.00	204		402017074270301	211ODBG	187.00	204.00	U Z	1939			230230
230231	FARINO BROS	2-REPLACEMENT	MONROE TWP	402019	0742708	157.00	190		402019074270801	211ODBG	170.00	190.00	U U	19650724			230231
230232	FORSGATE W C	FORSGATE 11	MONROE TWP	402023	0742858	130.00	314		402022074285301	211FRNG	272.00	314.00	P W	19610615	28-04106		230232
230232	MONROE TWP MUA	FORSGATE 11	MONROE TWP	402023	0742858	130.00	314		402022074285301	211FRNG			P W				230232
230233	NJ HOME FOR BOY	BOYS HOME 2	MONROE TWP	402034	0742333	75.00	450		402034074233301	211FRNG			U Z	1928			230233
230234	NJ HOME FOR BOY	BOYS HOME 3	MONROE TWP	402036	0742344	95			402036074234401	211FRNG			U Z				230234
230235	NJ HOME FOR BOY	1-1913	MONROE TWP	402036	0742351	110.00	514		402036074235101	211FRNG			U Z	1913			230235
[illegible]	[illegible]	BOYS HOME 4 FORSGATE FARMS	MONROE TWP	402038	0742345	95.00	432		402038074234501	211FRNG	410.00	440.00	U Z	19630513	28-01653		230236
230237	[illegible]	[illegible]	MONROE TWP	402038	0742755	140.00	222		402038074275501	211ODBG	178.00	222.00	U Z	19541115	28-01241		230237
230238	FORSGATE FARMS	FARM WELL 4-R	MONROE TWP	[illegible]	0742755	145.00	367		402038074275502	211FRNG	337.00	367.00	N W	19641008	28-05123		230238
230239	FORSGATE FARMS	3	MONROE TWP	402040	0742801	145.00	[illegible]		402040074280101	211ODBG	184.00	200.00	N W	19470915			230239
230240	FORSGATE W C	12-1961	MONROE TWP	402051	0742746	140.00	353		402051074274601	211FRNG	333.00	353.00	P W	19610315	28-04090	230240	230240
230240	MONROE TWP MUA	12-1961	MONROE TWP	402051	0742746	140.00	353		402051074274601	211FRNG			P W				230240
230241	BICA, NICHOLAS	BICA 1	MONROE TWP	402056	0742516	80.00	105		402058074251801	211ODBG	101.00	105.00	U Z	19540318			230241
230242	DIPPIERO, VITO	1949	MONROE TWP	402104	0742453	110.00	113		402104074245301	211ODBG	110.00	113.00	U U	19490620			230242
230242	HAAK, CARMELLA	1949	MONROE TWP	402104	0742453	110.00	113		402104074245301	211ODBG			U U				230242
230243	DUHERNAL W CO	DUHRNL OBS 41F	MONROE TWP	402123	0742215	44.75	348		402126074221501	211FRNG	340.00	348.00	U O	19441103			230243
230244	REESE, AUGUST	1971	MONROE TWP	402131	0742245	60.00	158		402131074224501	211ODBG	152.00	158.00	H W	19710428			230244
230245	RELIABLE WC	RELIABLE 1	MONROE TWP	402202	0742305	55.00	161		402232074231601	211ODBG	131.00	161.00	P W	1963	28-04638		230245
230245	MONROE TWP MUA	RELIABLE 1	MONROE TWP	402202	0742305	55.00	161		402232074231601	211ODBG			P W				230245
230245	MONROE TWP MUA	RELIABLE 1	MONROE TWP	402202	0742305	55.00	161		402232074231601	211ODBG			P W				230245
230246	RELIABLE WC	RELIABLE 2	MONROE TWP	402202	0742305	55.00	155		402233074231601	211ODBG	143.00	153.00	P W	19561219			230246
230246	MONROE TWP MUA	RELIABLE 2	MONROE TWP	402202	0742305	55.00	155		402233074231601	211ODBG			P W				230246
230246	MONROE TWP MUA	RELIABLE 2	MONROE TWP	402202	0742305	55.00	155		402233074231601	211ODBG			P W				230246
230247	SOMMA, ANTHONY	3-1967	MONROE TWP	402243	0742419	30.00	65.0		402243074241901	211ODBG	61.00	65.00	H W	1967			230247
230248	AMENDOLA VINCEN	MONROE TWP	MONROE TWP	402247	0742410	30.00	55.0		402247074241001	211ODBG	51.00	55.00	H W	19670613			230248
230249	ZARINS, ARTURS	1	MONROE TWP	402248	0742412	30.00	61.0		402248074241201	211ODBG	57.00	61.00	H W	19670429			230249
230250	DUHERNAL W CO	DUHERNL OBS 10	MONROE TWP	402252	0742301	22.44	93.0		402252074230101	211ODBG	83.00	93.00	U O	19381103			230250
230251	ANACONDA COPPER	11	PERTH AMBOY CITY	403028	0741643	20.00	40.0		403028074164301	211FRNG	29.00	40.00	U U	19441127			230251
230251	RARITAN R STEEL	11	PERTH AMBOY CITY	403028	0741643	20.00	40.0		403028074164301	211FRNG			U U				230251
230251	RARITAN STEEL C	11	PERTH AMBOY CITY	403028	0741643	20.00	40.0		403028074164301	211FRNG			U U				230251
230252	ANACONDA COPPER	18	PERTH AMBOY CITY	403028	0741645	25	55.0		403028074164501	211FRNG			U Z	1926			230252
230252	RARITAN R STEEL	18	PERTH AMBOY CITY	403028	0741645	25	55.0		403028074164501	211FRNG			U Z				230252
230252	RARITAN STEEL C	18	PERTH AMBOY CITY	403028	0741645	25	55.0		403028074164501	211FRNG			U Z				230252
230253	ANACONDA COPPER	16 A	PERTH AMBOY CITY	403029	0741641	25.00	58.0		403029074164101	211FRNG	43.00	58.00	U Z	1957			230253
230253	RARITAN R STEEL	16 A	PERTH AMBOY CITY	403029	0741641	25.00	58.0		403029074164101	211FRNG			U Z				230253
230253	RARITAN STEEL C	16 A	PERTH AMBOY CITY	403029	0741641	25.00	58.0		403029074164101	211FRNG			U Z				230253
230254	GEN CABLE CORP	8-1945	PERTH AMBOY CITY	403044	0741539	10.00	170		403044074153901	211FRNG			U Z	1945			230254
230254	PRECISION TECH PRODUCTS	8-1945	PERTH AMBOY CITY	403044	0741539	10.00	170		403044074153901	211FRNG			U Z				230254
230255	CARBORUNDUM CO	1	PERTH AMBOY CITY	403046	0741827	15.00	67.0		403046074182701	211FRNG	57.00	67.00	H W	19550822			230255
230256	AMBOY ICE CO	AMBOY ICE 1	PERTH AMBOY CITY	403049	0741659		160		403049074165901	211FRNG	130.00	160.00	U Z	1937			230256
230257	ALL STAR DAIRY	ALL STAR 1	PERTH AMBOY CITY	403052	0741654	61.00	158		403052074165401	211FRNG			U U	1932			230257
230258	MECHANIC REALTY	1 (R&H CHEM C)	PERTH AMBOY CITY	403054	0741547	10.00	149		403054074154701	211FRNG	141.00	149.00	N W	1913			230258
230259	AT TERRA CEDTTA	ATLANTIC 1	PERTH AMBOY CITY	403055	0741531		140		403055074153101	211FRNG			U Z	1918			230259
230260	MORTON SALT	PERTH AMBOY CITY	PERTH AMBOY CITY	403129	0741533	20.00	77.0	10.00	403129074153701	211FRNG	61.00	71.00	U Z	19761026		402	230260
230260		PERTH AMBOY CITY	PERTH AMBOY CITY	403129	0741533	20.00	77.0		403129074153701	211FRNG	67.00	77.00	U Z			402	230260
230261	CHEVRON OIL CO	1	PERTH AMBOY CITY	403150	0741603	30.00	83.0		403150074160301	211FRNG	74.00	83.00	N W	1951			230261
230262	CHEVRON OIL CO	OBS 1	PERTH AMBOY CITY	403150	0741603	30.00	82.0		403150074160302	211FRNG	72.00	82.00	U O				230262
230263	CHEVRON OIL CO	2	PERTH AMBOY CITY	403200	0741620	45.00	106		403200074162001	211FRNG	96.00	106.00	N W	1950			230263
230264	CHEVRON OIL CO	OBS 2	PERTH AMBOY CITY	403200	0741620	45.00	106		403200074162002	211FRNG	96.00	106.00	U O				230264
230265	CHEVRON OIL CO	11	PERTH AMBOY CITY	403211	0741612	13.74	94.0		403211074161301	211FRNG	11.00	94.00	U O				230265
230266	CHEVRON OIL CO	3	PERTH AMBOY CITY	403211	0741631	40	96.0		403212074163501	211FRNG	87.00	96.00	U U	1951			230266
230267	CHEVRON OIL CO	OBS 3	PERTH AMBOY CITY	403212	0741635	40.00	96.0		403212074163502	211FRNG	86.00	96.00	U O				230267
230268	BIRD & SONS	1	PERTH AMBOY CITY	403217	0741621	20.00	64.0	8.00	403217074162101	211FRNG	40.00	64.00	N W	19750724	28-04622	64.0	230268
230269	KEASBEY & MATTISO	1R	PERTH AMBOY CITY	403229	0741628	15.00	61.0		403229074162801	211FRNG			N W	1939			230269
230270	AMERICAN CYANAMID CO	TEST 2	PERTH AMBOY CITY	403231	0741616	12.00	57.0		403231074161601	211FRNG	53.00	57.00	U O				230270
230271	NJ WOOD FINISH	NJ WOOD 2	PERTH AMBOY CITY	403234	0741627	30.00	65.0		403234074162701	211FRNG			U U	194202			230271
230271	ALPHA ASSOC	NJ WOOD 2	PERTH AMBOY CITY	403234	0741627	30.00	65.0		403234074162701	211FRNG			U U				230271
230272	NJ WOOD FINISH	NJ WOOD 1	PERTH AMBOY CITY	403234	0741629	30.00	151		403234074162901	211FRNG			U Z	1930			230272
230272	ALPHA ASSOC	NJ WOOD 1	PERTH AMBOY CITY	403234	0741629	30.00	151		403234074162901	211FRNG			U Z				230272
230273	NJ WATER POLICY	PLNSBORO POND	PLAINSBORO TWP	401932	0743529	76.00	75.0		401932074352901	211MRPAM	70.00	75.00	U O	19700916			230273

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UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230274	GERAGHTY, MILLER	4-5	PLAINSBORO TWP	401934	0743525	70.00	43.0		401934074352501	112BRDG	40.00	43.00	U	T	1970			230274
230275	GERAGHTY, MILLER	4-6	PLAINSBORO TWP	401935	0743521	60.00	43.0		401935074352101	112BRDG	40.00	43.00	U	T	1970			230275
230276	GERAGHTY, MILLER	6-2	PLAINSBORO TWP	401935	0743530	68.00	62.0		401935074353001	112BRDG	57.00	62.00	U	T	1970			230276
230277	GERAGHTY, MILLER	4-4	PLAINSBORO TWP	401936	0743525	60.00	43.0		401936074352501	112BRDG	40.00	43.00	U	T	1970			230277
230278	GERAGHTY, MILLER	4-7	PLAINSBORO TWP	401936	0743528	65.00	43.0		401936074352801	112BRDG	40.00	43.00	U	T	1970			230278
230279	GERAGHTY, MILLER	4-8	PLAINSBORO TWP	401936	0743531	60.00	43.0		401936074353101	112BRDG	40.00	43.00	U	T	1970			230279
230280	GERAGHTY, MILLER	4-1	PLAINSBORO TWP	401937	0743522	60.00	43.0		401937074352201	112BRDG	40.00	43.00	U	T	1970			230280
230281	GERAGHTY, MILLER	4-2	PLAINSBORO TWP	401938	0743528	60.00	23.0		401938074352801	112BRDG	20.00	23.00	U	T	1970			230281
230282	GERAGHTY, MILLER	4-3	PLAINSBORO TWP	401938	0743530	70.00	24.0		401938074353001	112BRDG	21.00	24.00	U	T	1970			230282
230283	SIMONSON BROS	2	PLAINSBORO TWP	402006	0743319	90.00	80.0		402006074331901	211FRNG			I	W	19670419			230283
230284	SIMONSON BROS	1	PLAINSBORO TWP	402022	0743306	90.00	90.0		402022074330601	211FRNG			I	W	1952			230284
230285	JIS LANDFILL	4	SOUTH BRUNSWICK TWP	402159	0742744	111.00	82.0		402159074274401	112PNSK	62.00	82.00	U	D	197511			230285
230286	S I D REALTY	1968 WELL	SOUTH BRUNSWICK TWP	402016	0743019	105.00	125		402016074301901	211DDBG	122.00	125.00	H	W	1968			230286
230287	FORSGATE W C	OBS 1	SOUTH BRUNSWICK TWP	402054	0742929	135.00	245		402051074294301	211FRNG	218.00	228.00	U	Z	19360428			230287
230288	FORSGATE W C	TEST 1	SOUTH BRUNSWICK TWP	402054	0742929	133.00	200		402056074293601	211FRNG	190.00	200.00	U	U	19360423			230288
230289	MONROE TWP MUA	15(KIMBRY-CLK)	SOUTH BRUNSWICK TWP	402056	0742937	134.00	257		402056074293701	211FRNG	227.00	257.00	N	W	19360521			230289
230290	FORSGATE W C	OBS 2	SOUTH BRUNSWICK TWP	402057	0742946	140.00	228		402057074294901	211FRNG	218.00	228.00	U	Z	19360508			230290
230291	MONROE TWP MUA	OBS 1-1961	SOUTH BRUNSWICK TWP	402109	0743013	106.79	203		402109074301301	211FRNG	192.00	203.00	U	D	1961			230291
230292	MONROE TWP MUA	OBS 2-1761	SOUTH BRUNSWICK TWP	402109	0743012	106.99	104		402109074301202	211DDBG	93.00	104.00	U	D	1961			230292
230293	FORSGATE W C	OBS 3	SOUTH BRUNSWICK TWP	402113	0742922	115.00	205		402114074292901	211FRNG	195.00	205.00	U	Z	19360510			230293
230294	KORLESKI	KORLESKI 1	SOUTH BRUNSWICK TWP	402124	0742824	140.00	104		402124074282401	211DDBG			U	U				230294
230295	GREFCO INC	LAKES CARBON 1	SOUTH BRUNSWICK TWP	402125	0742920	120.00	233		402125074292001	211FRNG	187.00	233.00	N	W	19661121	28-06050		230295
230295	INTERN PERMALITE	LAKES CARBON 1	SOUTH BRUNSWICK TWP	402125	0742920	120.00	233		402125074292001	211FRNG			N	W				230295
230296	QUALITY EGG CO	2 (ABELE,J.F.)	SOUTH BRUNSWICK TWP	402122	0742939	115.00	97.0		402126074293901	211DDBG			U	U				230296
230297	QUALITY EGG CO	1 (ABELE,J.F.)	SOUTH BRUNSWICK TWP	402124	0742935	115.00	175		402128074294301	211FRNG	164.00	175.00	U	Z	19570529			230297
230298	STAUFFER CHEM	1	SOUTH BRUNSWICK TWP	402129	0742901	122.60	237		402129074290101	211FRNG	217.00	237.00	N	W	19650603			230298
230299	BADISHE PRODUCT	J-4	SOUTH BRUNSWICK TWP	402130	0742821	120.00	127		402130074282101	211DDBG	109.00	129.00	N	W		28-11549	300	230299
230299	BASF-WYANDOTTE	J-4	SOUTH BRUNSWICK TWP	402130	0742821	120.00	127		402130074282102	211DDBG	107.00	127.00	N	W	1956		300	230299
230300	BADISHE PRODUCT	BASF 2	SOUTH BRUNSWICK TWP	402128	0742830	130.00	288		402133074283401	211FRNG	246.00	288.00	N	N	19660924			230300
230300	BASF-WYANDOTTE	BASF 2	SOUTH BRUNSWICK TWP	402128	0742834	130.00	298		402133074284201	211FRNG			N	W				230300
230301	FORSGATE W C	OBS 4	SOUTH BRUNSWICK TWP	402132	0742919	110.00	215		402133074292301	211FRNG	202.00	212.00	U	Z	19560511			230301
230302	FORSGATE W C	FORSGATE 14	SOUTH BRUNSWICK TWP	402138	0742940	115.00	200		402134074294001	211FRNG	170.00	200.00	P	W	19550414			230302
230302	MONROE TWP MUA	FORSGATE 14	SOUTH BRUNSWICK TWP	402138	0742940	115.00	200		402134074294001	211FRNG			P	W				230302
230302	SOUTH BRUNSWICK MUA	FORSGATE 14	SOUTH BRUNSWICK TWP	402138	0742940	115.00	200		402134074294001	211FRNG			P	W				230302
230303	PHELPS DODGE CO	2-1957	SOUTH BRUNSWICK TWP	402139	0742820	125.00	227		402139074282001	211MRPA	197.00	227.00	N	W	19370612			230303
230304	PHELPS DODGE CO	IR-1962	SOUTH BRUNSWICK TWP	402143	0742821	127.00	222		402143074282101	211FRNG	192.00	222.00	N	W	19620105			230304
230305	PHELPS DODGE CO	1-1957	SOUTH BRUNSWICK TWP	402143	0742821	127.00	225		402143074282102	211FRNG	205.00	225.00	U	Z	19570314			230305
230306	PHELPS DODGE CO	PHELPS DODGE 3	SOUTH BRUNSWICK TWP	402147	0742847	120.00	207		402147074284701	211FRNG	201.00	207.00	U	D	1968			230306
230307	KORDUS, TEDDY	1	MONROE TWP	402150	0742744	120.00	120		402150074274401	211DDBG	100.00	120.00	I	W	1961			230307
230308	JIS LANDFILL	2	SOUTH BRUNSWICK TWP	402154	0742758	125.40	71.0		402151074275201	112PNSK	51.00	71.00	U	D	197509			230308
230309	JIS LANDFILL	1	SOUTH BRUNSWICK TWP	402151	0742751	122.20	81.0		402155074280101	112PNSK	61.00	81.00	U	D	197509			230309
230310	PERMUTIT CORP	4-(28-6108)	SOUTH BRUNSWICK TWP	402159	0743510	110.00	79.0		402159074351001	211FRNG	69.00	79.00	N	W	19661209			230310
230310	SYBRON CHEMICAL INC	4-(28-6108)	SOUTH BRUNSWICK TWP	402159	0743510	110.00	79.0		402159074351001	211FRNG			N	W				230310
230311	SOUTHARD, R M	1(WINCKMAN,W)	SOUTH BRUNSWICK TWP	402159	0743017	105.0	107		402200074304801	211FRNG	104.00	107.00	H	W	19370112			230311
230312	PERMUTIT CORP	TEST HOLE 1	SOUTH BRUNSWICK TWP	402200	0743514	120.00	77.0		402200074351402	211FRNG	72.00	77.00			19661208			230312
230312	SYBRON CHEMICAL INC	TEST HOLE 1	SOUTH BRUNSWICK TWP	402200	0743514	120.00	77.0		402200074351402	211FRNG								230312
230313	PERMUTIT CORP	TEST HOLE 2	SOUTH BRUNSWICK TWP	402200	0743514	120.00	77.0		402200074351403	211FRNG	72.00	77.00	U	T	1966			230313
230313	SYBRON CHEMICAL INC	TEST HOLE 2	SOUTH BRUNSWICK TWP	402200	0743514	120.00	77.0		402200074351403	211FRNG			U	T				230313
230314	PERMUTIT CORP	TEST HOLE 3	SOUTH BRUNSWICK TWP	402200	0743514	120.00			402200074351404	211MRPA			U	T	1966			230314
230314	SYBRON CHEMICAL INC	TEST HOLE 3	SOUTH BRUNSWICK TWP	402200	0743514	120.00			402200074351404	211MRPA			U	T				230314
230315	SOUTH BRUNSWICK MUA	13	SOUTH BRUNSWICK TWP	402204	0743024	102.20	138		402204074302401	211FRNG	103.00	138.00	P	W	19710803			230315
230316	AEROCHEM CORP	AEROCHEM 2	SOUTH BRUNSWICK TWP	402206	0743515	120.00	100		402206074351501	211FRNG			C	W	1961			230316
230317	JIS LANDFILL	3	SOUTH BRUNSWICK TWP	402207	0742755	109.70	71.0		402207074275501	112PNSK	51.00	71.00	U	D	197510			230317
230318	AEROCHEM CORP	ABANDONED WELL	SOUTH BRUNSWICK TWP	402207	0743517	120.00	100		402207074351701	211FRNG			U	U				230318
230319	SOUTH BRUNSWICK MUA	12	SOUTH BRUNSWICK TWP	402220	0742958	92.80	135		402220074294901	211FRNG	110.00	135.00	P	W	19631203			230319
230320	MOLSTEIN, R.C	1	SOUTH BRUNSWICK TWP	402223	0742824	100.00	182		402223074282401	211FRNG	162.00	182.00	I	W	19521125			230320
230322	SOUTH BRUNSWICK MUA	11	SOUTH BRUNSWICK TWP	402230	0743040	122.00	115		402226074301301	211FRNG	95.40	115.40	P	W	19631028			230322
230323	SMITH, LAWRENCE	1966	SOUTH BRUNSWICK TWP	402229	0742810	100.00	164		402229074281001	211FRNG	154.00	164.00	H	W	19660322			230323
230325	MID EAST ALUM	1 ANODIZING DIV	SOUTH BRUNSWICK TWP	402231	0743003	110.0	116		402233074300501	211FRNG	101.00	116.00	N	W	19631120	28-04665		230325
230326	GANTOWASSO, A J	1	SOUTH BRUNSWICK TWP	402309	0743131	98.00	50.0		402309074313101	211FRNG	46.00	49.00	H	W	19570115			230326
230327	S BRUNSWICK BD ED	1 HIGH SCHOOL	SOUTH BRUNSWICK TWP	402309	0743134	85.00	39.0		402309074313401	211FRNG	29.00	39.00	T	W	19591006			230327
230328	GIBBS NURSERY	GIBBS 1973	SOUTH BRUNSWICK TWP	402310	0742635	130.00	96.0		402310074263501	211DDBG	86.00	96.00	H	W	19730402			230328
230329	DEY BROTHERS	2	SOUTH BRUNSWICK TWP	402315	0742652	115.00	248		402315074265201	211FRNG	215.00	248.00	U	U	19550525			230329
230330	AHMED, MUSTAPHA	1	SOUTH BRUNSWICK TWP	402317	0742717	115.00	90.0		402317074271701	211FRNG	176.00	206.00	H	W	1936			230330
230331	DEY BROTHERS	3-1965	SOUTH BRUNSWICK TWP	402318	0742650	110.00	90.0		402318074265001	211DDBG			U	D	1965			230331
230332	AHMED, MUSTAPHA	2	SOUTH BRUNSWICK TWP	402319	0742708	105.00	208		402319074271101	211FRNG	178.00	208.00	I	W	19580627	28-03140		230332
230333	FORGOTSON, SAM	1	SOUTH BRUNSWICK TWP	402357	0742632	107.00	49.0		402357074263201	211MRPA	45.00	49.00	U	Z	19550618			230333
230334	FORGOTSON, SAM	5 BRUNSWICK TWP	SOUTH BRUNSWICK TWP	402357	0742647				402357074264701				H	W				230334
230335	ELIZABETHTOWN W	834 CLINTON	SOUTH PLAINFIELD BORO	402624	0742122	70.00	350		402544074260901	231BRCK	77.00	350.00	P	W	19651029	25-13354		230335
230336	MIDDLESEX W C	31 PARK AVE	SOUTH PLAINFIELD BORO	403550	0742440	75.00	500		403550074244001	231BRCK	110.00	500.00	P	W	19641014			230336
230337	MIDDLESEX W C	28 PARK AVE	SOUTH PLAINFIELD BORO	403552	0742334	75.00	500		403552074233401	231BRCK	97.00	500.00	P	W	1964			230337
230338	MIDDLESEX W C	29 PARK AVE	SOUTH PLAINFIELD BORO	403553	0742337	75.00	500		403553074233701	231BRCK	109.00	500.00	P	W	1964			230338
230339	MIDDLESEX W C	32 PARK AVE	SOUTH PLAINFIELD BORO	403554	0742332	75.00	501		403554074233201	231BRCK	88.00	501.00	P	W	19641			230339
230340	MIDDLESEX WATER CO	30 PARK AVE	SOUTH PLAINFIELD BORO	403555	0742429	75.00	500	18	403555074233501	231BRCK	97.83	500	P	W	19640916		500	230340
230340		30 PARK AVE	SOUTH PLAINFIELD BORO	403555	0742429	75.00	500	12	403555074233501	231BRCK			P	W			500	230340
230341	NJ WATER POLICY	QUIGLEY	SAYREVILLE BORO	402516	0742131	10.00	29.0		402516074213101	112CPMY	26.00	29.00	U	D	1968			230341
230342	NJ WATER POLICY	TECH TAPE 3	SAYREVILLE BORO	402527	0742118	10.00	36.0		402527074211801	211DDBG	33.00	36.00	U	D	19680126			230342
230343	NJ WATER POLICY	SUN BISCUIT 5	SAYREVILLE BORO	402553	0742033	17.00	39.0		402553074203301	211DDBG	36.00	39.00	U	D	1968			230343
230344	SAYREVILLE W D	SWD 2	SAYREVILLE BORO	402558	0742013	22.19	37.0		402558074201301	211DDBG	31.00	37.00	U	D	1957			230344
230345	SAYREVILLE W D	SWD J	SAYREVILLE BORO	402604	0742003	30.00	83.0		402604074200301	211DDBG	63.00	83.00	P	W	19651011			230345
230346	SAYREVILLE W D	SWD B	SAYREVILLE BORO	402604	0742004	27.00	81.0		402604074200401	211DDBG	71.00	81.00	P	W	19580908			230346
230347	SAYREVILLE W D	SWD TEST 1	SAYREVILLE BORO	402604	0742004	31.00	69.0		402604074200402	211DDBG	58.00	69.00	U	T	1963			230347
230348	SAYREVILLE W D	OBS WELL 101	SAYREVILLE BORO	402605	0741957	29.90	279		402605074195701	211FRNG	269.00	279.00	U	D	19680729			230348
230349	NJ WATER POLICY	NAT LEAD 6	SAYREVILLE BORO	402605	0742108	9.00	23.0		402605074210801	211RRTN	20.00	23.00	U	D	1968			230349
230350	SAYREVILLE W D	OBS WELL 102	SAYREVILLE BORO	402608	0741955	30.40	277		402608074195501	211FRNG	267.00	277.00	U	D	19680904			230350
230351	SAYREVILLE W D	SWD 1	SAYREVILLE BORO	402605	0741959	35.27	82.0		402608074195701	211DDBG	76.00	82.00	U	D				230351
230352	SAYREVILLE W D	RECHARGE 1 M	SAYREVILLE BORO	402605	0741958	34.00	280		402609074195201	211FRNG	225.00	280.00	U	W	19670712			230352
230353	SAYREVILLE W D	OBS WELL 103	SAYREVILLE BORO	402611	0741955	35.20	273		402611074195501	211FRNG	262.00	273.00	U	D	19680919			230353
230354	SAYREVILLE W D	SWD C	SAYREVILLE BORO	402612	0742010	32.00	73.0		402612074201001	211DDBG	60.00	73.00	U	Z	19581006			230354
230355	SAYREVILLE W D	SWD A	SAYREVILLE BORO	402614	0741950	30.00	82.0		402614074195001	211DDBG	72.00	82.00	P	W	19690121			230355

DATE: 01/09/89

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UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230356	SAYREVILLE W D	SWD F	SAYREVILLE BORO	402614	0741955	28.00	74.0		402614074195501	211DDBG	53.00	74.00	P	W	19590221			230356
230357	SAYREVILLE W D	SWD TEST 4	SAYREVILLE BORO	402616	0742029	20.00	89.0		402616074202901	211DDBG	78.00	89.00	U	T	1963			230357
230358	SAYREVILLE W D	SWD K	SAYREVILLE BORO	402617	0741945	48.00	90.0		402617074194501	211DDBG	70.00	80.00	P	W	19651006			230358
230359	SAYREVILLE W D	SWD D	SAYREVILLE BORO	402618	0741952	29.00	75.0		402618074195201	211DDBG	64.00	75.00	P	W	19580926			230359
230360	SAYREVILLE W D	SWD TEST 2	SAYREVILLE BORO	402618	0741952	50.00	78.0		402618074195202	211DDBG	67.00	78.00	U	T	1963			230360
230361	SAYREVILLE W D	SWD E	SAYREVILLE BORO	402617	0741958	28.00	62.0		402619074195801	211DDBG	39.00	62.00	P	W	1938			230361
230362	PERTH AMBOY WATER DEPARTM	AMBOY 60	SAYREVILLE BORO	402619	0742009	25.00	67.0		402619074200901	211DDBG	52.00	67.00	P	W	19701117			230362
230363	SAYREVILLE W D	TEST 1 1944	SAYREVILLE BORO	402620	0742039	23.00	205		402620074203901	211FRNG	185.00	205.00	U	T	19441025			230363
230364	SAYREVILLE W D	SWD J	SAYREVILLE BORO	402620	0742124	5	107		402620074212401	211FRNG			U	D	1937			230364
230365	DUHERNAL W CO	DUH SCH 4	SAYREVILLE BORO	402633	0742120	5.70	160		402623074212701	211FRNG	148.00	160.00	U	D	1931			230365
230366	SAYREVILLE W D	SWD L	SAYREVILLE BORO	402624	0741939	63.00	89.0		402624074193901	211DDBG	79.00	89.00	P	W	19651202			230366
230367	SAYREVILLE W D	SWD G	SAYREVILLE BORO	402624	0741944	46.00	97.0		402624074194401	211DDBG	56.00	87.00	P	W	19600323			230367
230368	SAYREVILLE W D	T	SAYREVILLE BORO															

SITE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230512	ERDMAN, W	E BRUNSWICK TWP	EAST BRUNSWICK TWP	402531	0742822	85.00			402531074282201	211FRNG			H	W				230512
230513	WILLIAMS, BOB	E BRUNSWICK TWP	EAST BRUNSWICK TWP	402357	0742632	95.00	20.0		402357074263202	211FRNG			S	W				230513
230514	HERBERT SAND CO	E BRUNSWICK TWP	EAST BRUNSWICK TWP	402755	0742258	4.70	35.0	6.00	402755074225801	211FRNG	25.00	35.00	N	W	19760820		40.0	230514
230515	RAAB, GEORGE	E BRUNSWICK TWP	EAST BRUNSWICK TWP	402425	0742520	109.00			402425074252001	211DDBG			I	W				230515
230516	NOVAK	HULSART	OLD BRIDGE TWP	402123	0741849	110.06	19.0		402122074184601	211EGLS	0.00	19.00	U	D				230516
230517	KAISER AG CHEM	MONROE TWP	MONROE TWP	401923	0742830	120.00	196		401923074283001	211DDBG	165.00	196.00	N	W			300	230517
230519	COMPUTER SYSTEMS	NJE-AIR CONDITID	SOUTH BRUNSWICK TWP	402155	0743213		80	347	12	402209074313401	231SCKN	205.00	347.00	A	W	19600217	28-03746	347	230519
230519	NJE CORP	NJE-AIR CONDITID	SOUTH BRUNSWICK TWP	402155	0743213		80	347		402209074313401	231SCKN			A	W			347	230519
230520	BOYKO, OLLIE	1	PLAINSBORO TWP	402044	0743342	80.00	73.0	6.00	402044074334201	211FRNG	68.00	73.00	H	W	19761019	28-09369	73.0	230520
230521	COLUMBIAN CARBN	COLUMBIAN 1	PLAINSBORO TWP	402023	0743740	80.00	300		402023074374001	231LCKG			N	W		48-00030		230521
230522	SCHWEITZER, P J	11	SPOTSWOOD BORO	402413	0742241	25.00	63.0	24.00	402348074230201	211DDBG	53.00	63.00	N	W	19781014		68.0	230522
230523	STANLEY CORP	2	PERTH AMBOY CITY	403229	0741635	15.0	61.5	14.00	403217074164101	211FRNG	46.50	61.50	N	W	19770616		62.0	230523
230524	BIRD & SONS	5	PERTH AMBOY CITY	403212	0741619	20.00	67.0	12.00	403212074161901	211FRNG	57.00	67.00	N	W	19791008	26-04798	67.0	230524
230525	FORRESTAL LABS	7	PLAINSBORO TWP	402050	0743608	100.00	449		402050074360801	231BRCK				W				230525
230526	DOW JONES CO	DOW JONES 1-FIRE	SOUTH BRUNSWICK TWP	402218	0743512	80.00		505 14	402207074351301	231LCKG	37	505	U	W	19620424	28-04393	505	230526
230526		DOW JONES 1-FIRE	SOUTH BRUNSWICK TWP	402218	0743512	80.00		505 10	402207074351301	231LCKG			U	W			505	230526
230527	COLUMBIAN CARBN	10-1962	SOUTH BRUNSWICK TWP	402302	0743342	80.00	705	10.00	402302074334201	231BRCK	23.00	702.00	N	W	19510210	28-00222	705	230527
230528	GULF OIL CO	ABAN	SOUTH BRUNSWICK TWP	402447	0743020	95.00	225		402447074302001	211MRPA			U	U				230528
230529	ROMATOWSKI, C	GAS LITE RES	EAST BRUNSWICK TWP	402448	0742730	90.00			402451074272801	211FRNG			U	W			274	230529
230529	KORE JAPANESE RESD	GAS LITE RES	EAST BRUNSWICK TWP	402448	0742730	90.00			402451074272801	211FRNG			U	W			274	230529
230530	BRUNSWICKTWN WC	BWC 8	SOUTH BRUNSWICK TWP	402518	0743309	180.00	805	12.00	402518074330901	231BRCK	32.00	805.00	P	W	19591202		805	230530
230531	BRUNSWK RUBBER	2-1961	SOUTH BRUNSWICK TWP	402526	0743129	125.00	257	8	402522074313001	231BRCK	42	257	N	W	19610621		257	230531
230532	BRUNSWICKTWN WC	BWC 9	SOUTH BRUNSWICK TWP	402526	0743414	140.00	486	12.00	402526074341401	231BRCK	59.00	486.00	P	W	19600208		486	230532
230533	FLAGPOST INN	1	SOUTH BRUNSWICK TWP	402528	0743138	130.00	480		402528074313801	231BRCK			H	W				230533
230534	PERTH AMBOY WATER DEPARTM	OLD DEEP 8	OLD BRIDGE TWP	402536	0742018	10.00			402536074201801	211DDBG			P	W			96.0	230534
230535	BRUNSWICKTWN WC	BWC 7	SOUTH BRUNSWICK TWP	402547	0743305	170.00	703	12.00	402547074330501	231BRCK	34.00	703.00	P	W	19590820		703	230535
230536	JOHNSON & JOHNSON CO	WATER TANK	NORTH BRUNSWICK TWP	402620	0743015	100.00			402620074301501	231BRCK			N	W			296	230536
230537	BARATTA BUILDER	HOUSE WELL	MILLTOWN BORO	402645	0742620	65.00	300		402645074262001	231BRCK			H	W				230537
230538	E I DUPONT	2-OBS	SAYREVILLE BORO	402734	0741925	130.00	146		402734074192501	211DDBG			U	D				230538
230539	RODIE RUBBER CO	1	NEW BRUNSWICK CITY	402820	0742647	120.00	225		402820074264701	211MRPA			U	W				230539
230540	JOHNSON & JOHNSON CO	1	NORTH BRUNSWICK TWP	403000	0742644	40.00	601		403000074264401	231BRCK			N	W				230540
230541	SHELL OIL CO	44	WOODBRIDGE TWP	403231	0741518	17.00	35.0		403231074151801	211FRNG			N	W				230541
230542	SHELL OIL CO	2(28)	WOODBRIDGE TWP	403232	0741522	5.00	22.0		403232074152201	211FRNG			N	W				230542
230543	SHELL OIL CO	5(52)	WOODBRIDGE TWP	403242	0741526	24.76	42.0		403242074153301	211FRNG			U	D				230543
230544	SHELL OIL CO	4(51)	WOODBRIDGE TWP	403242	0741531	20.00	28.5		403243074152801	211FRNG			U	Z				230544
230545	SHELL OIL CO	5	WOODBRIDGE TWP	403243	0741533	20.00	44.5		403243074153301	211FRNG			N	W				230545
230546	SHELL OIL CO	9	WOODBRIDGE TWP	403249	0741538	22.00	45.0		403249074153801	211FRNG			N	W				230546
230547	SHELL OIL CO	3	WOODBRIDGE TWP	403250	0741534	26.00	43.0		403250074153401	211FRNG			U	D				230547
230548	SHELL OIL CO	8(R7)	WOODBRIDGE TWP	403257	0741539	16.92	36.0		403257074153901	211FRNG			U	D				230548
230549	SAYREVILLE W D	SWD R	SAYREVILLE BORO	402745	0741645	50.00	111	0.00	402746074164501	211DDBG	70.00	111.00	P	W	19800501	29-10300	137	230549
230550	A C PRINTING CO	9	DUNELLEN BORO	403537	0742720	60.00	325	12.00	403537074272001	231BRCK			C	W	19500831		326	230550
230551	SOUTH RIVER W D	SRWD 6	SOUTH RIVER BORO	402548	0742155	47.00	213	20.00	402557074215501	211FRNG	155.00	208.00	P	W	198003	28-11524	217	230551
230552	SOUTH BRUNSWICK MUA	15	SOUTH BRUNSWICK TWP	402018	0743021	105.00	166	32.00	402018074302102	211FRNG	116.00	126.00	P	W	19790501		184	230552
230552		15	SOUTH BRUNSWICK TWP	402018	0743021	105.00	166		402018074302102	211FRNG	146.00	166.00	P	W			184	230552
230553	MONROE TWP MUA	TEST 16	MONROE TWP	401950	0742750	125.00		9.00	401950074275001	211FRNG			U	Z	19800717		464	230553
230554	SAYREVILLE W D	SWD S	SAYREVILLE BORO	402745	0741645	100.00	286	20.00	402738074165901	211FRNG	213.00	286.00	P	W	19800421		309	230554
230555	MONROE TWP MUA	TEST 17	MONROE TWP	402010	0742811	135.00	205	20.00	401958074281901	211DDBG	168.00	200.00	P	W	19800725	28-11720	385	230555
230556	MONROE TWP MUA	TW-16A	MONROE TWP	401950	0742721	137.00	215	9.00	401950074272101	211DDBG	160.00	178.00	U	Z	19801009	28-11719	444	230556
230556		TW-16A	MONROE TWP	401950	0742721	137.00	215		401950074272101	211DDBG	188.00	215.00	U	Z			444	230556
230557	SOUTH AMBOY W D	SAWD 7A	SAYREVILLE BORO	402820	0741629	20.00	58.0	20.00	392833074163701	211DDBG	48.00	58.00	F	W	19790921	26-04812	58.0	230557
230558	FUTZ, STEPHEN	1	WOODBRIDGE TWP	403220	0741820		302		403220074182001	231BRCK			I	W	19541127			230558
230559	SECURITY STEEL	1	WOODBRIDGE TWP	403420	0741633		614		403420074163301	231BRCK			N	W				230559
230560	NATIONAL VARNISH	1	WOODBRIDGE TWP	403555	0741527		405		403553074152701	231BRCK			N	W				230560
230561	HOME FOR DIAB YETS	1	EDISON TWP	403317	0741607		614		403313074160701	231BRCK								230561
230562	NEW DOVER CHURCH	1	EDISON TWP	403500	0742033		111		403500074203301	231BRCK								230562
230563	PERTH AMBOY WATER DEPARTM	1	OLD BRIDGE TWP	402527	0742007		260		402527074200701	211FRNG			U	W				230563
230564	SOUTH BRUNSWICK TOWNSHIP	158-1	SOUTH BRUNSWICK TWP	402015	0743018	100.00	164	12.00	402015074301801	211FRNG	134.00	164.00	U	T	19780627	28-10332	196	230564
230565	MONROE TWP MUA	ROSSMORE SC 17	MONROE TWP	401958	0742817	130.00	197	0.00	401958074281902	211DDBG	165.00	197.00	F	W	19800814		383	230565
230566	STAUFFER CHEM	D-2	SOUTH BRUNSWICK TWP	402129	0742901	124.10	225	0.00	402129074290102	211FRNG	122.00	225.00	U	D	19820302	28-12856	239	230566
230567	MONROE TWP MUA		MONROE TWP	401950	0742750	137.00	244	8.00	401950074275002	211DDBG	163.00	171.00	F	W	19830707	28-13397	230	230567
230567		MTMUA 16A	MONROE TWP	401950	0742750	137.00	244		401950074275002	211DDBG	181.00	187.00	P	W			230	230567
230567		MTMUA 16A	MONROE TWP	401950	0742750	137.00	244		401950074275002	211DDBG	193.00	213.00	F	W			230	230567
230567		MTMUA 16A	MONROE TWP	401950	0742750	137.00	244		401950074275002	211DDBG	234.00	244.00	F	W			230	230567
230568	SCHWEITZER, P J	12	SPOTSWOOD BORO	402410	0742231	25.00	280	0.00	402410074223101	211FRNG	210.00	280.00	N	W	19830217	28-12880	289	230568
230569	SAYREVILLE W D	SWD T	SAYREVILLE BORO	402738	0741700	90.00	137	0.00	402738074170001	211DDBG	102.00	132.00	F	W	19820325	29-11861	163	230569
230570	PERTH AMBOY WATER DEPARTM	PERTH AMBOY 6	OLD BRIDGE TWP	402538	0741950	15.00	80.0	0.00	402538074195001	211DDBG	60.00	80.00	F	W	19821108	29-12351	86.0	230570
230571	PERTH AMBOY WATER DEPARTM	PERTH AMBOY 7	OLD BRIDGE TWP	402531	0741932	15.00	82.0	0.00	402528074193801	211DDBG	67.00	82.00	F	W	19830328	29-12352	90.0	230571
230573	FIRAKY, NICHOLAS	1	WOODBRIDGE TWP	403207	0741817	150.00	123	0.00	403207074181701	211FRNG			N	W	19650825	26-03264	123	230573
230574	POWESKA, FRANK	POWESKA 1	SAYREVILLE BORO	402737	0741736	100.00	135	0.00	402737074173601	211FRNG	125.00	135.00	I	W	19710602	26-04398	140	230574
230575	MCKEON, JOHN	MCKEON 1	SOUTH AMBOY CITY	402925	0741704	15.00	133	0.00	402925074170401	211FRNG	127.00	133.00	H	W	19751015	26-04635	138	230575
230576	SPINELLO CONST CO	SPINELLO 1	SOUTH AMBOY CITY	402933	0741718	30.00	165	0.00	402933074171801	211DDBG			U	Z		26-04710	165	230576
230577	CHEVRON OIL CO	SB-13A	PERTH AMBOY CITY	403210	0741520	6.80	57.0	7.88	403210074152001	211FRNG	37.00	57.00	U	D	19811105	26-05321	61.0	230577
230578	CHEVRON OIL CO	E15A	WOODBRIDGE TWP	403236	0741543	5.00	64.2	7.88	403236074154302	211FRNG	44.20	64.20	U	D	19811113	26-05324	75.5	230578
230580	PERTH AMBOY WATER DEPARTM	OBS 1	OLD BRIDGE TWP	402517	0742050	20.00	62.0	0.00	402517074205001	211DDBG	57.00	62.00	U	Z	19541220	28-01524	85.0	230580
230581	PARLIN SUPPLY CO	1	SAYREVILLE BORO	402734	0742037	80.00	44.0	0.00	402734074203701	211DDBG	24.00	44.00	I	W	19740601	28-08423	70.0	230581
230582	MIDD CO UTIL AUTH	MADISON CONNET	OLD BRIDGE TWP	402505	0742129	15.00	61.0	6.00	402505074212901	211DDBG	56.00	61.00	Z	W	19780901	28-10495	85.0	230582
230583	AIR PRODUCTS	AIR PRODUCTS 1	SOUTH BRUNSWICK TWP	402154	0742931	105.00	172	0.00	402154074293101	211FRNG	152.00	172.00	F	W	19780824	28-10515	175	230583
230584	TOWN & COUNTRY METAL	CAM CHOY 1	MONROE TWP	401610	0742624	125.00	240	0.00	401610074262401	211DDBG	230.00	240.00	F	W	19780904	28-10626	240	230584
230585	CHIRLIAN, PAUL	DEEPWELL	EAST BRUNSWICK TWP	402450	0742330	120.00	248	0.00	402450074233001	211FRNG	238.00	248.00	Z	W	19801111	28-11899	248	230585
230586	PROTINICK, MICHAEL	2	CRANBURY TWP	401943	0742926	110.00	170	0.00	401943074292601	211DDBG	80.00	170.00	I	W	19810620	28-12332	177	230586
230587	KOSMO, JOSEPH	KOSMO 1	OLD BRIDGE TWP	402205	0742123	90.00	166	0.00	402205074212301	211DDBG	160.00	166.00	H	W	19811119	28-12534	185	230587
230588	STAUFFER CHEM	D-1	SOUTH BRUNSWICK TWP	402120	0742859	127.00	238	0.00	402120074285901	211FRNG	198.00	238.00	U	D	19820323	28-12855	239	230588
230589	STAUFFER CHEM	D-3	SOUTH BRUNSWICK TWP	402129	0742854	124.50	229	0.00	402129074285401	211FRNG	129.00	229.00	U	D	19820315	28-12857	229	230589
230590	E I DUPONT	LAYNE 57 OBS	SAYREVILLE BORO	402721	0741957	90.00	79.0	0.00	402721074195701	211DDBG	74.00	79.00	U	D	19550305	29-01391	126	230590
230591	E I DUPONT	LAYNE 58 OBS	SAYREVILLE BORO	402655	0741916	85.00	92.7	0.00	402655074191601	211DDBG	88.70	92.70	U	D	19550513	29-01390	126	230591
230592	E I DUPONT	LAYNE 59 3 OBS	SAYREVILLE BORO	402659	0741910	80.00	98.0	0.00	402659074191001	211DDBG	94.00	98.00	U	D	19550804	29-01593	113	230592
230593	OLD BRIDGE DEV CORP	SS2	OLD BRIDGE TWP	402158	0741910	95.00	307	0.00	402158074191001	211DDBG	273.00	278.00	U	D	19810518	29-11116	355	230593
230593		SS2	OLD BRIDGE TWP	402158	0741910	95.00	307		402158074191001	211DDBG	302.00	307.00	U	D			355	230593
230594	OLD BRIDGE DEV CORP	PW-81 TW1	OLD BRIDGE TWP	402157	0741911	95.00	315	0.00	402157074191101	211DDBG	275.00	315.00	U	D	19810701	29-11122	355	230594
230595	OLD BRIDGE DEV CORP	SS4	OLD BRIDGE TWP	402153	0741915	105.70	290	0.00	402153074191501	211DDBG	285.00	290.00	U	D	19810701	29-11118	298	230595

330462	[illegible]							
330463	RIENMANN, JOHN							
330463	FOX, ELLIS	FOX 1	PITTSGROVE TWP					
330464	MCALLISTER, …	FOX 1	PITTSGROVE TWP		41.00	41.00 P W	30-0331[illegible]	330459
330465	PAULUS, …		PITTSGROVE TWP			H W	30-03814	330460
330466	WILSON, MERRILL	PAULUS 1	ALLOWAY TWP		70	70 H W 19550501		330461
330467	FRANKLIN TWP SA…	WILSON 1	PITTSGROVE TWP		67	74 H W 19791005		330462
330468	PIPER FOCKS					H W		330463
330469	PARVIN STATE P…	PIPER	PITTSGROVE TWP		39	53 H W 19741120		330463
330471	CON…		PITTSGROVE TWP		94	104 H P 19700000		330464
			PITTSGROVE TWP		15	65 H W 19720000		330465
					104	114 P W 19840000		330469
					65	70 H W 19861215		330471

DATE: 01/09/[illegible]

UNIQUE ID	OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH		DIAMETER	STATION ID	AQUIFER	INTERVAL	…							
330472	LAVIN, HARRY	[illegible]	PITTSGROVE TWP	393028	0750508	101		80		393028075050801	121CKKD	75	80	H	W					
330473	PRESS	PRESS 1	PITTSGROVE TWP	393401	0750637	125		88		393401075063701	121CKKD	83	88	H	W					
330474	HUNTER CONSTRUCTION	HUNTER	PITTSGROVE TWP	393439	0750714	126		84		393439075071401	121CKKD	79	84	H	W	19870115			84	330474
330553	SEABROOK, JOHN M	SALEM FARMS	MANNINGTON TWP	393700	0752538	5		50	16	393700075253801	211MLRW	20	50	I	W	19840824	30-03440		50	330553
330568	SALEM FARMS CORP	HALLTOWN RD	MANNINGTON TWP	393734	0752529	15		32	5	393734075252901	211MLRW	25	32	H	W	19811107	30-02568		60	330568
330581	COWTOWN AUCTIONEERS	COWTOWN AUCTIONS	PILESGROVE TWP	393946	0752300	35		115	6	393946075230001	211EGLS	95	115	P	W	19751200	30-01467		143	330581
330657	MUSUMECI, ANTHONY	MUSUMECI FARMS	OLDMANS TWP	394353	0752353	45		260	12	394353075235301	211MRPAM	160	260	I	W	19830511	30-02862		260	330657
330660	DIETRICH, JIM	DIETRICH 1	OLDMANS TWP	394451	0752632	25		247	8	394451075263001	211MRPA	106.420	216.25	I	W	19840629	30-03381		278	330660
330660		DIETRICH 2	OLDMANS TWP	394451	0752632	25		247		394451075263201	211MRPA	234.25	244	I	W				278	330660
330664	GARDEN STATE …	[illegible]	MANNINGTON TWP	393734	0752111	15		166	4	393734075211101	211MLRW	123	166	C	W	19750800	30-01454		166	330664
330664	RED LION …	[illegible] ST …	MANNINGTON TWP	393734	0752111	15		166		393734075211101	211MLRW			C	W				166	330664
330665	BADER, LOUIS	[illegible]	PILESGROVE TWP	393946	0752012	60		140		393946075201201	211MLRW	103	140	J	W	19801015	30-02302		140	330665
330666	LOWER ALLOWAY …	AUXILIARY WELL	LOWER ALLOWAYS CR TWP	393027	0752749	5		230	2.50	393027075274901	211MLRW	180	230	U	C	19831110	34-02104		230	330666
330666		AUXILIARY WELL	LOWER ALLOWAYS CR TWP	393027	0752749	5		230	1.50	393027075274901	211MLRW			U	C				230	330666
330667	UPPER PITTSGROVE …	[illegible]	UPPER PITTSGROVE TWP	393712	0751325	[illegible]		367	16	393712075132501	211MLRW	357	367	T	W	19620207	30-00925		367	330667
330669	TANT BUILDERS INC	TANT BUILDERS …	OLDMANS TWP	394317	0752240	30		100	4	394317075224001	211MCVL	90	100	H	W	19830823	30-02968		260	330669
350001	BERNARDS, W C	[illegible]	BERNARDS TWP	404339	0743242	[illegible].00	1450			404339074324201	231BRCK	64.00	1450.00	U	T	19620314	25-10173			350001
350002	BOUND BROOK W …	[illegible]	BOUND BROOK BORO	403344	0743202	40.00	352			403344074320201	231BRCK			P	W	1965				350002
350003	US ARMY	[illegible]	HILLSBOROUGH TWP	402910	0744029	115.00	220			402910074402901	231BRCK	33.00	220.00	P	W	1942				350003
350004	ASCOT DAIRIES	[illegible]	MONTGOMERY TWP	402750	0744002	100.00	200			402750074400201	231BRCK			N	W	1936				350004
350005	ASCOT DAIRIES	[illegible] 1960	MONTGOMERY TWP	402750	0744002	100.00	400			402750074400202	231BRCK	27.00	400.00	N	W	1960				350005
350006	ROCKY HILL W …	[illegible]	ROCKY HILL BORO	402436	0743855	141.00	200			402436074385501	231BRCK			P	W					350006
350007	[illegible]	[illegible]	[illegible]	403327	0743177	80.00	315			403327074317701	231BRCK			N	W					350007
350008	US GEOLOGICAL …	[illegible]	BERNARDS TWP	404142	0743116	230.00	71.4		[illegible]	404142074311601	231BRCK	70.00	71.40	U	O	19810903		71.4		350008
350009	GAF CORP	[illegible]	BOUND BROOK BORO	403437	0743337	100	556		11	403437074333701	231BRCK	39	556	N	W	19570112	25-06282		556	350009
350010	MANVILLE BORO	MANVILLE …	MANVILLE BORO	403259	0743518	40		325	10	403259074351801	231BRCK	18	22	P	W	19650315	25-10881		325	350010
350010		MANVILLE …	MANVILLE BORO	403259	0743518	40		325		403259074351801	231BRCK	22	325	P	W				325	350010
350011	WILSON PRODUCTS	WILSON 3	HILLSBOROUGH TWP	403021	0744343	25		480	3	403021074434301	231BRCK	60	480	H	W	19670403	25-14233		480	350011
350012	TWO GUYS FROM HARRISON	TWO GUYS 1	NORTH PLAINFIELD BORO	403843	0742458	170		350	10	403843074245801	231BRCK	61.58	350	P	W	19581220	25-08131		350	350012
350012	ELIZABETHTOWN WC	TWO GUYS 1	NORTH PLAINFIELD BORO	403843	0742458	170		350	8	403843074245801	231BRCK			P	W				350	350012
350013	ELIZABETHTOWN WC	[illegible] AVE	GREEN BROOK TWP	403612	0742734	60		350	8	403612074273401	231BRCK	42	350	P	W	19650224	25-12665		350	350013
350014	MINNESOTA MINING & MANUF	3M-TWO	MONTGOMERY TWP	402653	0744143	110		244	12	402653074414301	231BRCK	31.75	244	N	W	19550514	28-01602		244	350014
350015	MINNESOTA MINING & MANUFA	3M-FOUR	MONTGOMERY TWP	402702	0744132	100	362		12	402702074413201	231BRCK	31	362	N	W	19550922	28-01704		362	350015
350016	NJ NEUROPSYCHIATRIC	EIGHT	MONTGOMERY TWP	402509	0744142	165	300		10	402509074414201	231BRCK	41.58	300	U	W	19630215	28-04605		300	350016
350017	SOMERSET CO PARK COMMISSION	REEVE C…	BRANCHBURG TWP	403530	0744059	80		200	10	403530074405901	231BRCK	61	200	T	W	19790201	25-20242		200	350017
350017		REEVE CULTURAL …	BRANCHBURG TWP	403530	0744059	80		200	6	403530074405901	231BRCK			T	W				200	350017
350018	MANVILLE BORO	MANVILLE WD …	BRIDGEWATER TWP	403304	0743527	30		280	16	403304074352701	231BRCK	20	280	P	W	19650604	25-12785		280	350018
350018		MANVILLE WD …	BRIDGEWATER TWP	403304	0743527	30		290	10	403304074352701	231BRCK			P	W				280	350018
350019	GUYER, JACOB	FARM & NURSERY	MONTGOMERY TWP	402630	0743749	95		250	6	402630074374901	231BRCK	50	250	I	W	19770710	28-09725		250	350019
350020	RARITAN VALLEY …	RV 1	BRIDGEWATER TWP	403458	0743815	140	506		10	403458074381501	231BRCK	34	506	I	W	19541105	25-03926		506	350020
350021	CENTRAL JERSEY JEWISH …	IRRIGATION	FRANKLIN TWP	403001	0743058	110		330	6	403001074305801	231BRCK	50	330	I	W	19740615	25-17490		330	350021
350022	LOUGHRAN, ROBERT	LOUGHRAN 1	FRANKLIN TWP	402740	0743222	90		150	6	402740074322201	231BRCK	60	150	H	W	19721227	28-07786		150	350022
350023	UNION CARBIDE CO	SOMERSET …	FRANKLIN TWP	402852	0743004	105		300	6	402852074300401	231BRCK	50	300	N	W	19811106	25-21995		300	350023
350024	SOUTH BRANCH …	PARSONAGE 1	HILLSBOROUGH TWP	403239	0744147	60		150	6	403239074414701	231BRCK	60	150	H	W	19811100	25-22435		150	350024
350025	GILLIGO, CARMEN	GILLIGO 1	MONTGOMERY TWP	402512	0744435	370		160	6	402512074443601	231LCKG	20	160	H	W	19611101	28-04247		160	350025
350026	BALDINO, JOHN	BALDINO 1	MONTGOMERY TWP	402435	0744314	160		200	6	402435074431401	231BRCK	50	200	H	W	19841112	28-14495		200	350026
350027	ORTHO PHARMACEUTICAL …	[illegible]	RARITAN BORO	403435	0743960	125		622	8	403435074390001	231BRCK	50	622	N	W	19690409	25-15153		622	350027
350028	NEW JERSEY NEUROPSYCH…	SEVEN	MONTGOMERY TWP	402510	0744116	115		303	12	402510074411601	231BRCK	33	303	U	W	19580212	28-02988		303	350028
350028		SEVEN	MONTGOMERY TWP	402510	0744116	115		303	8	402510074411601	231BRCK			U	W				303	350028
350029	[illegible], GORDON	MAIN …	FRANKLIN TWP	402522	0743647	170		450	6	402522074364701	231BRCK	100	450	H	W	19830903	28-13723		450	350029
350030	ELIZABETHTOWN …	GREEN BROOK …	GREEN BROOK TWP	403630	0742751	55		451	12	403600074275601	231BRCK	34	451	P	W	19480000	4500023		451	350030
350031	MANVILLE BORO	MANVILLE …	MANVILLE BORO	403300	0743528	45		18	6	403300074352801	231BRCK	9	18	P	W	19710320	25-15838		18	350031
350032	ELIZABETHTOWN …	GREEN BROOK …	GREEN BROOK TWP	403559	0742818	60		433	12	403559074281801	231BRCK	45.25	433	P	W	19540000	25-02717		433	350032
350033	SOMERSET …	[illegible]	[illegible] TWP	[illegible]	[illegible]	70		220		403017074335401	231BRCK			H	W		25-15576		220	350033
350034	SOMERSET CO PARK …	WARREN …	WARREN TWP	403255	0742941	130		130	8	403255074294101	231BRCK	50	130	I	W	19650000	25-12669		130	350034
350035	WILLMAN, …	1-1975	[illegible]	[illegible]	0743719	300		245	6	404037074371901	231BSLT	50	248	H	W	19750000			248	350035
[illegible]	[illegible]	1-1961	BRIDGEWATER TWP	[illegible]	0743720	190		120	6	403652074372201	231BRCK	20	120	H	W	19610000			120	350036
350037	ELIZABETHTOWN …	N PLAINFIELD …	NORTH PLAINFIELD BORO	403640	0742653	60	300		12	403640074265301	231BRCK	40	300	P	W	19520000	45-00022		300	350037
350037		N PLAINFIELD …	NORTH PLAINFIELD BORO	403640	0742653	60	300		10	403640074265301	231BRCK			P	W				300	350037
350038	[illegible]	[illegible]	BRANCHBURG TWP	403130	[illegible]	[illegible]	[illegible]			403130074450301	231BRCK	51.0	235.0	I	W	19730802	25-17010			350038
350039	SUYDAM FARMS	SUYDAM FARMS CO	FRANKLIN TWP	402741	0743062	105.	200.0		[illegible]	[illegible]	231BRCK	[illegible]	[illegible]	H	W	[illegible]	[illegible]-11489			350039
350040	SMITH, WILLIAM	SOMERSET …	MONTGOMERY TWP	402545	0744200	120.0	155.0			402545074420001	231BRCK	52.0	155.0	H	W	1970111[illegible]				
350041	[illegible]	DEMUND …	MONTGOMERY TWP	402556	0744430	357		200	6	402556074443001	231LCKG	32	200	H	W	19780508	28-10208			
350041	DEMUND, ALFRED	DEMUND 1	MONTGOMERY TWP	402556	0744430	357		200		402556074443001	231LCKG			H	W				200	350041
350042	DEBENS …	DEBENS …	MONTGOMERY TWP	[illegible]	0744251	170				[illegible]	231BRCK			R	W					350042
350043	JAMES, LEONARD F	JAMES …	MONTGOMERY TWP	402801	0744246	200		117		402801074424601	231BRCK	11.0	117.0	H	W	19651211	28-05693		117	350043
350044	STAATS, WILLIAM	STAATS IRRIGATION	BRANCHBURG TWP	403456	0744248	135.0	250.0			403456074424801	231BRCK	60.0	250.0	I	W	19830331	25-23833		250.0	350044
350045	BERNARDS TWP …	BERNARDS …	BERNARDS TWP	[illegible]	0743435	200	106.5			[illegible]	231BRCK	32	106.5		W	19630703	25-11357		106.5	350045
350046	VAN WERT, FRED	CORONET 1	WARREN TWP	403927	0742727	400		222		403927074272701	231BSLT	50	222	H	W	19810915	25-22318		222	350046
350046	GORDNER, …	CORONET 2	WARREN TWP	403927	0742727	400		222		403927074272701	231BSLT			H	W				222	350046
370001	ANDOVER BORO WD	ABWD 1	ANDOVER BORO	405932	0744412	[illegible].00	150			405932074441201	112DTSH			P	W	1936				370001
370002	BOROUGH OF BRANCHVILLE	BRANCH…	BRANCHVILLE BORO	410851	0744443	540	170		12	410851074444301	360KTTN	54.00	170.00	P	W	19580104	22-03214		170	370002
370003	NJ CONSERVATION	[illegible]	MONTAGUE TWP	411531	0744015	1540.00	175			411531074401501	354SNGK			P	W					370003
370004	NATIONAL PARK SERVICE	PETERS VALLEY	SANDYSTON TWP	411151	0745107	525.00	300			411151074510701	344ESPS	123.00	300.00	R	W	19720325				370004
370005	SPARTA TWP WD	1965 …	SPARTA TWP	410459	0743849	620.00	140			410459074384901	112DTSH	120.00	140.00	P	W	1965				370005
370006	NATIONAL PARK SERVICE	WHITE …	WALPACK TWP	410542	0745733	330.00	249			410542074573301	350HGFL	20.00	249.00	R	W	19720416				370006
370007	NATIONAL PARK SERVICE	[illegible] FORD	WALPACK TWP	410822	0745408	365.00	180			410822074540801	354SNGK	12.00	180.00	R	W	19720508				370007
370008	US ARMY …	[illegible]	SANDYSTON TWP	411102	0745130	460.00	40.0			411102074513001	112DLSC									370008
370009	SPARTA TWP WD	SPARTA …	SPARTA TWP	410459	0743849	620.00	140		[illegible]	410459074384902	112DTSH	130.00	140.00	P	W	19651203				370009
370010	STILLWATER WD	[illegible]	STILLWATER TWP	410258	0744950	445.35	69.0		10.00	410258074495002	112SFDF	57.00	69.00	P	W	19801029	21-04828	71.0		370010
370011	STILLWATER WD	[illegible]	STILLWATER TWP	410258	0744950	445.35	60.0		10.00	410258074495001	112SFDF	50.00	60.00	P	W	19801016		60.0		370011
370011		[illegible]	STILLWATER TWP	410258	0744950	445.35	60.0			410258074495001	112SFDF			P	W		21-04827	60.0		370011
370197	BALDWIN, [illegible]	[illegible]	VERNON TWP	411255	0742951	450.0		147	6.0	411255074295101	360KTTN	22.0	147.0	H	W	19650000	22-07285		147	370197
370198	[illegible], JOHN	[illegible]	WANTAGE TWP	411224	0744012	695.0		63	6.0	411224074401201	361MRBC	50.0	63.0	H	W	19810915	22-20334		63	370198
370199	HATTERMAN, ANN	HATTERMAN FARM	WANTAGE TWP	411109	0743519	410.0		75	6.0	411109074351901	350KTTN	54.0	75.0	I	W	19821200	22-21335		75	370199
370200	[illegible], GEORGE	WAGNER NURSERY	HARDYSTON TWP	410633	0743646	630.0		95.0	6.0	410633074364601	361MRBG	50.0	95.0	H	W	19800813	22-19681		95.0	370200
370200	WAGNER, DOT	WAGNER NURSERY	HARDYSTON TWP	410633	0743646	620.0		95.0		410633074364601	361MRBG			H	W				95.0	370200
370201	VAN WINGERDEN …	VAN W…	LAFAYETTE TWP	410812	[illegible]	645.0		250.0	[illegible]	410812074432901	361MRBG	43.0	250.0	I	W	19871123	22-26677		250.0	370201
370202	NATIONAL PARK SERVICE	[illegible]	WALPACK TWP	410914	0745404	460		95	[illegible]	410914074540401	340DVNN	42	95	U	O				95	370202
390001	EMERSON … CLUB	CLUB 1	[illegible]	403920	[illegible]	441.00	[illegible]			[illegible]	[illegible]	56.00	130.00	R	W	1951				390001

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UNIQUE ID	OWNER			LAT	LON			STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
230512	ERDMAN		EAST BRUNSWICK TWP														
230513	WILLIAMS, EVE		EAST BRUNSWICK TWP	402830	0742830	38.00											
230514	HERBERT, BARBA		EAST BRUNSWICK TWP	402830	0742830	95.00											
230515	RAAD, GEORGE		EAST BRUNSWICK TWP	402750	0742258	4.90	60.0	4027500742258	231FRNG	4.00	35.00	N	W				230515
230516	NOVA		EAST BRUNSWICK TWP	402830	0742830	35.00	5.00	4028300742830	231FRNG	4.00	35.00	N	W				230516
230517	KAISER AG CHEM		CORTLANDT TWP	401330	0742500	109.00		4013300742500	231FRNG	4.00	35.00	S	W				230517
230519	COMPUTER SYSTEMS		MONROE TWP	402123	0741849	110.00	40.0	4021230741849	231FRNG	25.00	35.00	N	W	10/14/80			230519

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UNIQUE ID	SITE OWNER			LAT	LON			STATION ID	AQUIFER	SCREENED INTERVAL		W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
390002	ADCOCK, H		BERKELEY HEIGHTS TWP	404041	0742511	55.00	350	4040410742511301	231BRCK	24.00	280.00			19481018			390002
390003	SOPER, W C	SOPER	BERKELEY HEIGHTS TWP	404015	0742236	415.00	198	4040150742363801	231BRCK	28.00	198.00	H	W	19610125			390003
390004	ALMA PHARMAC	REMEIS 2	BERKELEY HEIGHTS TWP	404056	0742556	235.00	317	4040560742555901	231BRCK	52.00	317.00	N	W	19560203	25-04899		390004
390005	ALMA PHARMAC	REMEIS 1	BERKELEY HEIGHTS TWP	404059	0742557	225.00	160	4040590742555701	231BRCK			N	W	1949			390005
390006	ALMA PHARMAC	REMEIS 3	BERKELEY HEIGHTS TWP	404059	0742559	220.00	355	4040590742559601	231BRCK	48.00	255.00	N	W	19560220			390006
390007	BERKELEY CHEM	BERK CHEM 1	BERKELEY HEIGHTS TWP	404113	0742641	210.00	200	4041130742641001	231BRCK	67.00	200.00	N	W	19560715	25-05558		390007
390008	ALMA PHARMAC	REMEIS 4	BERKELEY HEIGHTS TWP	404114	0742607	210.00	303	4041140742607001	231BRCK	41.00	303.00	A	W	19651218	25-13038		390008
390009	LANZA, F	LANZA	CLARK TWP	403622	0742019	70.00	75.0	4036220742019001	231BRCK			H	W	1951			390009
390010	NJ HIGHWAY AUTH	HIGH 1	CLARK TWP	403629	0741853	90.00	150	4036290741853001	231BRCK	42.00	150.00			19520517			390010
390011	BRUNO, CALOGERA	BRUNO	CLARK TWP	403630	0741842	85.00	100	4036300741842001	231BRCK	21.00	100.00	H	W	19581020			390011
390012	KATH, A A	KATH	CLARK TWP	403640	0742000	85.00	108	4036400742000401	231BRCK	36.00	108.00	H	W	19540319			390012
390013	NUHN, H	NUHN	CLARK TWP	403657	0741949	100.00	208	4036570741949101	231BRCK	85.00	208.00	H	W	19550928			390013
390014	BREWER, C	BREW	CLARK TWP	403659	0741919	85.00	94.0	4036590741919401	231BRCK	54.00	94.00	H	W	1951			390014
390015	MURACA, S	MURACA	CLARK TWP	403731	0741904	71.00	133	4037310741904601	231BRCK	61.00	133.00	H	W	19560128	26-01329		390015
390016	PAUL, MIRO	MITRO	CLARK TWP	403707	0741919	60.00	114	4037070741919001	231BRCK	47.00	114.00	H	W	19571013			390016
390017	FRANCIS, MARIE	MARTIN	CLARK TWP	403705	0741801	65.00	165	4037050741801001	231BRCK	73.00	160.00	H	W	19590515			390017
390018	WYZYNSKI, J	WYZYNSKI	CLARK TWP	403711	0741914	65.00	92.0	4037110741914001	231BRCK	52.00	92.00	H	W	19511108			390018
390019	GWOYER,	GWOYER	CLARK TWP	403717	0741701	70.00	106	4037170741701101	231BRCK	83.00	106.00	H	W	19581206			390019
390020	FRANZIESO, A	FRANZIESO	CLARK TWP	403719	0741802	70.00	98.0	4037190741802001	231BRCK	76.00	98.00	H	W	19551103			390020
390021	KELEMEN, JOH	KELEMEN	CLARK TWP	403726	0741826	70.00	110	4037260741826501	231BRCK	78.00	100.00	H	W	19571115	26-01753		390021
390022	FIBRO CORP	FIBRO 2	CLARK TWP	403743	0741902	80.00	250	4037430741902001	231BRCK			U	U				390022
390023	FIBRO CORP	FIBRO 1	CLARK TWP	403744	0741858	75.00	250	4037440741900301	231BRCK	67.00	250.00	N	W	1957			390023
390024	FIBRO CORP	FIBRO 3	CLARK TWP	403745	0741902	75.00	250	4037450741902601	231BRCK	73.00	250.00	N	W	19600610			390024
390025	US GYPSUM CO	US GYP 1	CLARK TWP	403746	0741319	70.00	505	4037460741819701	231BRCK	49.00	505.00	N	W	1946			390025
390026	US GYPSUM CO	US GYP 2	CLARK TWP	403754	0741816	70.00	300	4037540741816101	231BRCK			N	W				390026
390027	GENERAL MOTORS	HYATT 1	CLARK TWP	403759	0741832	65.00	501	4037590741832301	231BRCK	35.00	505.00	N	W	1940			390027
390028	GENERAL MOTORS	HYATT 2	CLARK TWP	403759	0741832	65.00	505	4037590741832302	231BRCK			N	W	19441230			390028
390029	GENERAL MOTORS	HYATT 3	CLARK TWP	403801	0741836	65.00	504	4038010741836101	231BRCK	33.00	504.00	N	W	19530122	26-00580		390029
390030	BENDERSON DEV C	BENDERSON	CRANFORD TWP	403831	0741713	60.00	305	4038310741713001	231BRCK	22.00	300.00		T	19630606			390030
390031	FISCHER, C	FISCHER	CRANFORD TWP	403847	0741857	95.00	100	4038470741857301	231BRCK	4.00	100.00	H	W	19560321	26-01369		390031
390032	WICHNER, T	WICHNER	CRANFORD TWP	403857	0741713	65.00	101	4038570741713601	231BRCK	22.00	101.00	H	W	19571217			390032
390033	CONST SPEC INC	CONST 1	CRANFORD TWP	403903	0741734	80.00	200	4039030741734001	231BRCK	35.00	200.00	N	W	19571224			390033
390034	WARGACKI, M	WARGACKI	CRANFORD TWP	403911	0741718	85.00	95.0	4039110741719001	231BRCK	23.00	95.00	H	W	19560124	26-01338		390034
390035	LOUIS GONELLA	GONELLA	CRANFORD TWP	403911	0741735	90.00	98.0	4039110741735001	231BRCK	36.00	98.00	H	W	1957			390035
390036	EDELMANOVICH, J	EDELMANOVICH	CRANFORD TWP	403912	0741704	85.00	96.0	4039120741704001	231BRCK	21.00	96.00	H	W	19571220			390036
390037	GIBSON ASSOC	GIBSON 1	CRANFORD TWP	403925	0741715	80.00	271	4039250741715601	231BRCK	32.00	271.00			19560617	26-01371		390037
390038	VENNERI, A	VENNERI 1	CRANFORD TWP	403929	0741742	80.00	240	4039290741742001	231BRCK					19540825	26-00983		390038
390039	SHAHEEN, E	SHAHEEN 1	CRANFORD TWP	404003	0741803	70.00	117	4040030741803601	231BRCK	36.00	117.00	A	W	19501202	26-00224		390039
390040	ELIZABETHTOWN	BENICA NO 1	CRANFORD TWP	404017	0741909	71.00	275	4040170741909001	231BRCK					1911			390040
390041	ELIZABETHTOWN W	NOMAHEGAN 1	CRANFORD TWP	404030	0741902	68.00	250	4040300741902501	231BRCK					1911			390041
390042	CRANFORD POOL A	SWIM POOL 1	CRANFORD TWP	404025	0741925	90.00	155	4040250741926001	231BRCK	48.00	155.00	R	W	19540625			390042
390043	REICHOLD CHEM C	REICH 1	ELIZABETH CITY	403814	0741216	10.00	400	4038140741216001	231BRCK	40.00	400.00	N	W	19671031	26-04096		390043
390044	PERK CHEM CO IN	PERK CHEM	ELIZABETH CITY	403838	0741137	10.00	285	4038380741113701	231BRCK	41.00	285.00	N	W	19650921	26-03500		390044
390045	EXACT ANADIZ CO	EXACT	ELIZABETH CITY	403848	0741126	15.00	467	4038480741126001	231BRCK	75.00	467.00	N	W	1965	26-03156		390045
390046	VOLUFTE INC	VOLUFTE 1	ELIZABETH CITY	403858	0741327	35.00	400	4038580741327001	231BRCK	29.00	400.00		W	19521110	26-00362		390046
390047	MARCUS, M	MARCUS 1	ELIZABETH CITY	403901	0741255	10.00	600	4039010741255001	231BRCK	20.00	600.00	N	W	19521212			390047
390048	THOMAS-BETTS CO	THOM-BETTS	ELIZABETH CITY	403904	0741137	30.00	500	4039040741137001	231BRCK	61.00	500.00	Z	W	19500807	26-00181		390048
390049	BRYAN, J E	BRYAN 1	ELIZABETH CITY	403927	0741345	45.00	255	4039270741345001	231BRCK	35.00	255.00	H	W	19500321			390049
390050	WALDO, JOSEPH	WALDO 1	ELIZABETH CITY	403934	0741339	45.00	150	4039340741340001	231BRCK	33.00	150.00	H	W	19530430	26-00651		390050
390051	LELAND TUBE CO	LELAND	ELIZABETH CITY	403949	0741427	50.00	500	4039490741427401	231BRCK	33.00	500.00	N	W	19651015			390051
390052	GENERAL CHEM CO	GEN CHEM	ELIZABETH CITY	403951	0741011	5.00	500	4039510741101101	231BRCK	106.00	500.00	U	U	19651218	26-03554		390052
390053	EINHORN, WM	EINHORN	ELIZABETH CITY	404007	0741502	70.00	110	4040070741500901	231BRCK	20.00	110.00	H	W	19540515	26-00893		390053
390054	LONDAT PETZ CO	LONDAT 2	ELIZABETH CITY	404026	0741115	10.00	300	4040260741115501	231BRCK	40.00	300.00	U		1965	26-03056		390054
390055	ELIZABETHTOWN	N ELIZ DRG	ELIZABETH CITY	404052	0741221	54.00	203	4040520741221001	231BRCK	94.00	203.00		W	19530612	26-00696		390055
390056	BLACK DIAMOND	DIAMOND	ELIZABETH CITY	404053	0741125	10.00	265	4040530741125001	231BRCK	92.00	265.00	N	W	19600908	26-02301		390056
390057	ELIZABETHTOWN	GRASSMAN	ELIZABETH CITY	404055	0741302	42.00	202	4040550741302601	231BRCK	31.00	202.00	U	D	19530608			390057
390058	SCHWEITZER, P	SCHWEITZE	ELIZABETH CITY	404113	0741215	58.00	660	4041130741215701	231BRCK	0.00	660.00	U	D				390058
390059	CIRCLE PLASTIC	CIRCLE 1	GARWOOD BORO	403904	0741938	90.00	302	4039040741938601	231BRCK	40.00	302.00	U	T	19620810	26-02649		390059
390060	NATIONAL GYPSUM	NAT GYP 1	GARWOOD BORO	403911	0741950	86.00	136	4039110741950001	231BRCK			N	W	1913	46-00192		390060
390061	NATIONAL GYPSUM	NAT GYP 6	GARWOOD BORO	403911	0741958	85.00	185	4039110741958001	231BRCK			N	W	19451205	46-00193		390061
390062	NATIONAL GYPSUM	NAT GYP 5	GARWOOD BORO	403912	0741920	83.00	536	4039120741920001	231BRCK	35.00	536.00	N	W	1934	46-00194		390062
390063	NATIONAL GYPSUM	NAT GYP 4	GARWOOD BORO	403912	0741923	85.00	350	4039120741923601	231BRCK	43.00	380.00	N	W	19451129	46-00195		390063
390064	DIAMOND EXPAN	DIA EXP	GARWOOD BORO	403912	0741940	101.00	260	4039120741940001	231BRCK	51.00	260.00	N	W	19630621	26-02818		390064
390065	ELIZABETHTOWN	HILLSIDE 5	HILLSIDE TWP	404102	0741344	30.00	300	4041020741344001	231BRCK	25.00	300.00	U	U	1951	26-00247		390065
390066	ELIZABETHTOWN	HILLSIDE 4	HILLSIDE TWP	404106	0741353	30.00	400	4041060741353001	231BRCK	21.00	400.00	U	D	1951	26-00246		390066
390067	ELIZABETHTOWN	HILLSIDE 3	HILLSIDE TWP	404109	0741356	30.00	400	4041090741356001	231BRCK	25.00	400.00	U	U	1950	26-00221		390067
390068	ELIZABETHTOWN	HILLSIDE 6	HILLSIDE TWP	404113	0741355	30.00	500	4041130741355601	231BRCK	32.00	600.00	U		19500929	26-00201		390068
390069	ELIZABETHTOWN	HILLSIDE 1	HILLSIDE TWP	404116	0741414	30.00	400	4041160741414101	231BRCK	21.00	400.00	U		19500618			390069
390070	DILLEN DEVS MFG	DILLEN 1	HILLSIDE TWP	404118	0741336	40.00	379	4041180741336401	231BRCK	80.00	379.00	N	W	19510118	26-00237		390070
390071	EMELOID CO INC	EMELOID 1	HILLSIDE TWP	404131	0741332	41.00	461	4041310741332601	231BRCK	89.00	461.00	N	W	19660128	26-03615		390071
390072	EMELOID CO INC	EMELOID 2	HILLSIDE TWP	404132	0741338	40.00	352	4041320741338001	231BRCK	92.00	352.00	N	W	19481006	26-00055		390072
390073	MONDET CORP CO	MONDET 1	HILLSIDE TWP	404140	0741423	55.00	365	4041400741423001	231BRCK					1941			390073
390074	BRISTOL MYERS	BRISTOL 1	HILLSIDE TWP	404146	0741329	55.00	400	4041460741329001	231BRCK					1952	26-00418		390074
390075	BRISTOL MYERS	BRISTOL 4	HILLSIDE TWP	404148	0741345	60.00	186	4041480741345001	231BRCK			U	Z	1930			390075
390076	SUN TUBE	SUN TUBE	HILLSIDE TWP	404149	0741339	60.00	275	4041490741339101	231BRCK			U	Z	1933			390076
390077	BRISTOL MYERS	BRISTOL 3	HILLSIDE TWP	404150	0741339	60.00	404	4041500741338601	231BRCK					1952			390077
390078	BRISTOL MYERS	BRISTOL 2	HILLSIDE TWP	404150	0741352	60.00	400	4041500741335201	231BRCK			U	Z	1939			390078
390079	BRISTOL MYERS	BRISTOL 5	HILLSIDE TWP	404155	0741355	60.00	500	4041550741335801	231BRCK	49.00	500.00	N	W	19670821	26-04018		390079
390080	ATLAS TOOL CO	ATLAS 1	HILLSIDE TWP	404203	0741407	100.00	300	4042030741407001	231BRCK	51.00	300.00	N	W	19591102	26-02070		390080
390081	INTERNAT METAL	INTER ALL	HILLSIDE TWP	404205	0741429	100.00	299	4042050741429601	231BRCK	68.00	299.00			19350709			390081
390082	BENNET OIL CO	BENNET OIL	HILLSIDE TWP	404208	0741430	110.00	298	4042080741430001	231BRCK	78.00	298.00			1935			390082
390083	HATFIELD WIRE	HATFIELD 1	HILLSIDE TWP	404209	0741418	105.00	621	4042090741418001	231BRCK	47.00	621.00			19490511			390083
390084	HATFIELD WIRE	HATFIELD 2	HILLSIDE TWP	404209	0741418	105.00	605	4042090741418002	231BRCK	66.00	605.00	N	W	19510813	26-00273		390084
390085	HATFIELD WIRE	HATFIELD 3	HILLSIDE TWP	404210	0741415	105.00	360	4042100741415601	231BRCK	45.00	380.00	N	W	19490608	26-00108		390085
390086	SCHMIT STEEL	SCHMIT	HILLSIDE TWP	404211	0741418	110.00	375	4042110741418001	231BRCK	72.00	372.00			19330218			390086
390087	COOPER ALLOY	COOPER 2	HILLSIDE TWP	404211	0741426	85.00	503	4042110741426001	231BRCK	39.00	503.00	N	W	19481007	26-00052		390087
390088	LINDEN AIR PRO	LINDE	HILLSIDE TWP	404213	0741426	116.00	322	4042130741426001	231BRCK	84.00	322.00		W	19480924	26-00057		390088
390089	COOPER ALLOY	COOPER 1	HILLSIDE TWP	404215	0741439	78.00	350	4042150741437601	231BRCK			N	W	1942			390089
390090	COOPER ALLOY	COOPER 3	HILLSIDE TWP	404214	0741430	90.00	400	4042140741426801	231BRCK	39.00	400.00	N	W	19491118	26-00053		390090
390091	COOPER ALLOY	COOPER 4	HILLSIDE TWP	404213	0741431	90.00	501	4042130741431201	231BRCK	55.00	501.00	N	W	19520116	26-00392		390091

UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL	W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
390182	POKKER, F R	POKKER	NEW PROVIDENCE BORO	404157	0742318	320.00	77.0		404157074231801	231BRCK	14.00 77.00	H	W	19540128			390182
390183	CLEARWATER CLUB	CLEAR 1	NEW PROVIDENCE BORO	404222	0742316	263.00	196		404222074231001	231GRWG	50.00 196.00	H	W	19540313	25-03200		390183
390184	NILS, J AHL	AHL	NEW PROVIDENCE BORO	404235	0742352	255.00	155		404235074235201	231BRCK	125.00 155.00	H	W	19540105	25-03271		390184
390185	CLOSS, W E	CLOSS 1	NEW PROVIDENCE BORO	404246	0742316	315.00	512		404246074231601	231BRCK	225.00 512.00	H	W	19600513			390185
390186	NATIONAL STARCH PRODUCTS	NATIONAL 2	PLAINFIELD CITY	403546	0742723	60.00	304		403546074272301	231BRCK	66.00 304.00	N	W	19500214	45-00313		390186
390187	NATIONAL STARCH PRODUCTS	NATIONAL 1	PLAINFIELD CITY	403548	0742718	60.00	304		403548074271801	231BRCK	65.00 304.00	N	W	19500130	45-00312		390187
390188	NATIONAL STARCH PRODUCTS	NATIONAL 6	PLAINFIELD CITY	403550	0742716	60.00	436		403550074271601	231BRCK	72.00 436.00	N	W	19640225	25-11751		390188
390189	ELIZABETHTOWN W	FIFTH ST WELL	PLAINFIELD CITY	403554	0742628	70.00	350		403554074262801	231BRCK	84.00 350.00	P	W	19650602	25-12961		390189
390190	INT PLNFLD MOTR	INT MOTOR 3	PLAINFIELD CITY	403600	0742656	60.00	600		403600074265601	231BRCK	67.00 600.00	N	W	19480703			390190
390191	MUHLENBERG HOSP	MUHLENBERG 3	PLAINFIELD CITY	403625	0742417	95.00	502		403625074241701	231BRCK	54.00 502.00		W	19620619			390191
390192	TAUB, H	TAUB 1	PLAINFIELD CITY	403634	0742524	90.00	200		403634074252401	231BRCK	63.00 200.00	A	W	19530430			390192
390193	HYMAN, OKUM	OKUN 1	PLAINFIELD CITY	403643	0742442	105.00	130		403643074244201	231BRCK	83.00 130.00	H	W	19521211	25-02218		390193
390194	SAFEWAY STORES	SAFEWAY 1	PLAINFIELD CITY	403652	0742508	95.00	303		403652074250801	231BRCK	44.00 303.00	A	W	19510512			390194
390195	QUEEN CITY BDT	QUEEN CITY 1	PLAINFIELD CITY	403654	0742514	97.00	310		403654074251401	231BRCK	53.00 310.00	U	U	19490314			390195
390196	ELIZABETHTOWN W	PROSPECT ST	PLAINFIELD CITY	403656	0742337	160.00	350		403656074233701	231BRCK	114.00 350.00	P	W	19600120	25-09037		390196
390197	TEPPER BROS	TEPPER 1	PLAINFIELD CITY	403705	0742532	90.00	427		403705074253201	231BRCK	42.00 427.00	N	W	19500418			390197
390198	ELIZABETHTOWN W	WATCHUNG AVE	PLAINFIELD CITY	403708	0742349	165.00	605		403708074234901	231BRCK	114.00 605.00	P	W	19590306	25-08185		390198
390199	ROSENBAUM, S	ROSENBAUM 1	PLAINFIELD CITY	403711	0742515	100.00	301		403711074251501	231BRCK	45.00 301.00	A	W	19500214	25-00606		390199
390200	L BAMBERGER CO	SUPPLY WELL 1	PLAINFIELD CITY	403716	0742518	100.00	501		403716074251801	231BRCK	53.00 501.00	C	W	1952	25-01922		390200
390201	L BAMBERGER CO	BAMBERGER 4	PLAINFIELD CITY	403716	0742518	100.00	37.0		403716074251802	231BRCK	31.00 37.00	U	T	1953	25-02902		390201
	BAMBERGER CO	BAMBERGER 3	PLAINFIELD CITY	403716	0742518	100.00	44.0		403716074251803	231BRCK	40.00 44.00	U	T	1953	25-02957		390202
	[illegible]	[illegible]	PLAINFIELD CITY	403716	0742518	100.00	34.0		403716074251804	231BRCK	31.00 34.00	U	T	1953	25-02956		390203
	[illegible]	[illegible]	PLAINFIELD CITY	403716	0742518	100.00	43.0		403716074251805	231BRCK	39.00 43.00	U	T	1953	25-02955		390204
390204	L BAMBERGER CO	BAMBERGER 5	PLAINFIELD CITY	403717	0742521	100.00	[illegible]		403717074252101	112SFDF	23.00 44.00		R	1953	25-02903		390205
390205	L BAMBERGER CO	RECHARGE 2	PLAINFIELD CITY	403718	0742521	100.00	34.0		403718074252102	112SFDF	17.00 34.00		R	1953	25-02892		390206
390206	L BAMBERGER CO	RECHARGE 1	PLAINFIELD CITY	403718	0742521	100.00	43.0		403718074252101	112SFDF	36.00 43.00	U	D	1953			[illegible]
390207	L BAMBERGER CO	BAMBERGER A	PLAINFIELD CITY	403719	0742523	100.00	44.0		403719074252301	231BRCK	34.00 44.00	U	D	1953	25-02660		390208
390208	L BAMBERGER CO	BAMBERGER B	PLAINFIELD CITY	403750	0742402	125.00	400		403750074240201	231BRCK	82.00 400.00	N	W	19660608	25-13694		390209
390209	WIGTON, ABBOTT C	WIGTON GS 1	PLAINFIELD CITY	403757	0742355	130.00	803		403757074235501	231BRCK	91.00 803.00	U	Z	1950			390210
390210	ELIZABETHTOWN W	ROCK WELL 1	RAHWAY CITY	403600	0741611	10.00	151		403600074161101	231BRCK	26.00 151.00	U	Z	1923			390211
390211	MAC LAC CO	MAC LAC 2	RAHWAY CITY	403600	0741611	10.00	150		403600074161102	231BRCK	24.00 150.00	U	Z	19250409			390212
390212	MAC LAC CO	MAC LAC 3	RAHWAY CITY	403601	0741603	10.00	150		403601074161103	231BRCK		U	U	1953			390213
390213	MAC LAC CO	TEST WELL 1	RAHWAY CITY	403617	0741757	20.00	301		403617074175701	231BRCK	22.00 301.00		T	1948			390214
390214	RAHWAY CITY WD	TEST HOLE 8	RAHWAY CITY	403623	0741749	11.00	21.0		403623074174901	112SFDF	16.00 21.00	U	T	19490830			390215
390215	RAHWAY CITY WD	TEST HOLE 11	RAHWAY CITY	403625	0741751	15.00	20.0		403625074175101	112SFDF		U	T	19490913			390216
390216	RAHWAY CITY WD	TEST HOLE 6	RAHWAY CITY	403626	0741742	18.00	29.0		403626074174201	112SFDF		U	T	1949			390217
390217	RAHWAY CITY WD	TEST HOLE 7	RAHWAY CITY	403626	0741745	25.00	18.0		403626074174501	112SFDF	13.00 18.00	U	T	19490825			390218
390218	RAHWAY CITY WD	TEST HOLE 9	RAHWAY CITY	403626	0741759	11.00	24.0		403626074175901	112SFDF	19.00 24.00	U	T	19490915			390219
390219	RAHWAY CITY WD	TEST HOLE 10	RAHWAY CITY	403628	0741749	23.00	28.0		403628074174901	112SFDF	23.00 28.00	U	T	1949			390220
390220	RAHWAY CITY WD	TEST HOLE 5	RAHWAY CITY	403630	0741740	10.00	23.0		403630074174001	112SFDF	15.00 23.00	U	T	1948			390221
390221	RAHWAY CITY WD	ALDON 1	RAHWAY CITY	403631	0741648	20.00	349		403631074164801	231BRCK	33.00 349.00	A	W	19480913			390222
390222	RAHWAY CITY WD	TEST HOLE 3	RAHWAY CITY	403631	0741730	34.00	49.0		403631074173001	231BRCK		U	T	1948			390223
390223	RAHWAY CITY WD	TEST HOLE 4	RAHWAY CITY	403631	0741736	35.00	49.0		403631074173601	112SFDF		U	T	19481117			390224
390224	RAHWAY CITY WD	TEST HOLE 2	RAHWAY CITY	403633	0741721	37.00	52.0		403633074172101	231BRCK	46.00 52.00	U	T	1948			390225
390225	RAHWAY CITY WD	TEST HOLE 1	RAHWAY CITY	403634	0741719	37.00	53.0		403634074171901	231BRCK	48.00 53.00	U	T	1948			390226
390226	JENSEN, P	JENSEN 1	RAHWAY CITY	403637	0741624	20.00	100		403637074162401	231BRCK	40.00 100.00	H	W	1952			390227
390227	QUINN BODEN CO	QUINN 1	RAHWAY CITY	403646	0741622	20.00	357		403646074162201	231BRCK	137.00 357.00	U	U	1944			390228
390228	QUINN BODEN CO	QUINN 2	RAHWAY CITY	403646	0741622	20.00	357		403646074162202	231BRCK		U	U	1944			390229
390229	QUINN BODEN CO	QUINN GS 1	RAHWAY CITY	403646	0741622	20.00	253		403646074162203	231BRCK	32.00 253.00	U	Z	1934			390230
390230	QUINN BODEN CO	QUINN GS 2	RAHWAY CITY	403646	0741622	20.00	36.0		403646074162204	231BRCK	35.00 36.00		U	1966			390231
390231	NATIONAL GROCERY COMPANY	NAT GROCERY 1	RAHWAY CITY	403649	0741645	30.00	300		403649074164501	231BRCK	47.00 300.00	C	W	19570222			390232
390232	RYAN, D	RYAN	RAHWAY CITY	403650	0741637	18.00	94.0		403650074163701	231BRCK			U				390233
390233	MERSHEN, W	MERSHEN	RAHWAY CITY	403650	0741715	25.00	101		403650074171501	112SFDF				1904			390234
390234	MERCK CHEM CO	MERCK GS 1	RAHWAY CITY	403653	0741551	25.00	1108		403653074155101	231BRCK			U	1941			390235
390235	RAHWAY CITY WD	TEST WELL 2	RAHWAY CITY	403656	0741635	10.00	300		403656074163501	231BRCK	16.00 300.00		T	1948			390236
390236	LENTZ, C	LENTZ	RAHWAY CITY	403657	0741657	25.00	111		403657074165701	231BRCK	43.00 111.00	H	W	19590120			390237
390237	RAHWAY CITY WD	RAHWAY CITY 6	RAHWAY CITY	403658	0741708	30.00	269		403658074170801	112SFDF	43.00 58.00	P	W	1966	26-03793		390238
390238	RAHWAY CITY WD	RAHWAY CITY 3	RAHWAY CITY	403704	0741723	16.00	76.0		403704074172301	112SFDF	22.00 76.00	P	W	19531203			390239
390239	RAHWAY CITY WD	RAHWAY CITY 2	RAHWAY CITY	403705	0741722	16.00	51.0		403705074172201	112SFDF	12.00 51.00	P	W	19520121			390240
390240	RAHWAY CITY WD	RAHWAY CITY 4	RAHWAY CITY	403706	0741727	21.00	127		403706074172701	112SFDF	45.00 127.00	P	W	19540922			390241
390241	KODS BROS FUR	KODS 1	RAHWAY CITY	403707	0741656	20.00	350		403707074165601	231BRCK	40.00 350.00	A	W	19530508			390242
390242	RAHWAY CITY WD	RAHWAY CITY 1	RAHWAY CITY	403707	0741724	18.00	52.0		403707074172401	112SFDF	13.00 52.00	P	W	19520121			390243
390243	TINGLEY RUBER C	TINGLEY GS 1	RAHWAY CITY	403728	0741636	40.00	222		403728074163601	231BRCK		U	Z	1932			390244
390244	TINGLEY RUBER C	TINGLEY GS 2	RAHWAY CITY	403728	0741636	40.00	240		403728074163602	231BRCK		U	Z	19320707			390245
390245	FOOD FAIR CORP	FOOD FAIR	ROSELLE BORO	403842	0741631	70.00	304		403842074163101	231BRCK	32.00 304.00	A	W	19510827			390246
390246	ELIZABETHTOWN W	WALBERGA 2	ROSELLE BORO	403848	0741547	60.00	348		403848074154701	231BRCK	41.00 348.00	P	W	19601209	26-02360		390247
390247	ROSELLE GOLF CR	R GOLF CLUB	ROSELLE BORO	403850	0741609	60.00	400		403850074160901	231BRCK	31.00 400.00	I	W	19670126			390248
390248	NATIONAL COLOR LAB	NAT COLOR	ROSELLE BORO	403851	0741555	50.00	282		403851074155001	231BRCK	42.00 282.00			19640425	26-02928		390249
390249	ELIZABETHTOWN W	WALBERGA 4	ROSELLE BORO	403853	0741548	50.00	325		403853074154801	231BRCK	42.00 325.00	P	W	19610916	26-02463		390250
390250	ELIZABETHTOWN W	WALBERGA 1	ROSELLE BORO	403854	0741603	60.00	350		403854074160301	231BRCK	26.00 350.00	P	W	19601103	26-02302		390251
390251	ELIZABETHTOWN W	WALBERGA 3	ROSELLE BORO	403858	0741603	50.00	321		403858074160301	231BRCK	33.00 321.00	P	W	19610719	26-02412		390252
390252	ELIZABETHTOWN W	CHANDLER AVE	ROSELLE BORO	403903	0741505	40.00	350		403903074150501	231BRCK	45.00 350.00	P	W	19610428	26-02393		390253
390253	CUTTER, C	CUTTER	ROSELLE BORO	403910	0741407	40.00	251		403910074140701	231BRCK				1941			390254
390254	MAY, L	MAY	ROSELLE BORO	403912	0741654	85.00	127		403912074165401	231BRCK	27.00 29.00	H	W	19570726			390255
390255	ALL DISC RECORD	ALL DISC G S 1	ROSELLE BORO	403929	0741627	65.00	200		403929074162701	231BRCK	28.00 200.00	N	W	19600410	26-02183		390256
390256	ALL DISC RECORD	ALL DISC 1	ROSELLE BORO	403930	0741622	70.00	300		403930074162201	231BRCK	36.00 300.00	N	W	19630823	26-02776		390257
390257	ALL DISC RECORD	ALL DISC 2	ROSELLE BORO	403930	0741628	70.00	450		403930074162202	231BRCK	43.00 450.00	N	W	19680614	26-04172		390258
390258	KARAGHEUSIAN IN	KARAGHEUSIAN 1	ROSELLE BORO	403930	0741649	75.00	173		403930074164901	231BRCK	36.00 173.00			1928			390259
390259	KARAGHEUSIAN IN	KARAGHEUSIAN 2	ROSELLE BORO	403930	0741649	75.00	164		403930074164902	231BRCK				19310419			390260
390260	ELIZABETHTOWN W	FIRST AVE	ROSELLE BORO	403933	0741622	70.00	508		403933074162201	231BRCK	37.00 508.00	P	W	19570907	26-01696		390261
390261	ELIZABETHTOWN W	SECOND AVE	ROSELLE BORO	403935	0741603	70.00	404		403935074160301	231BRCK	35.00 404.00	U	Z	19600928			390262
390262	LAVIN, E A	LAVIN 1	ROSELLE PARK BORO	403942	0741541	80.00	107		403942074154101	231BRCK	21.00 107.00	H	W	19530609	36-00692		390263
390263	DOUGHERTY, E	DOUGHERTY	SCOTCH PLAINS TWP	403617	0742230	120.00	156		403617074223001	231BRCK	98.00 156.00	H	W	19560418	25-05397		390264
390264	HICKS, K	HICKS 1	SCOTCH PLAINS TWP	403620	0742250	120.00	103		403620074225001	231BRCK	68.00 103.00	H	W	19530402	25-02453		390265
390265	JONES, K F	JONES	SCOTCH PLAINS TWP	403634	0742231	130.00	175		403634074223101	231BRCK		H	W	19480818	25-00251		390266
390266	BRODHEAD, F M	BRODHEAD 1	SCOTCH PLAINS TWP	403655	0742214	110.00	155		403655074221401	231BRCK	68.00 155.00	H	W	19481030			390267
390267	TEMPE, H	TEMPE 1	SCOTCH PLAINS TWP	403705	0742212	102.00	132		403705074221201	231BRCK	68.00 132.00	H	W	19511013	25-01203		390268
390268	SIEVER, L	SIEVER 1	SCOTCH PLAINS TWP	403717	0742213	110.00	104		403717074221301	231BRCK		H	W	19530406			390269
390269	KIEP, H A	KIEP 1	SCOTCH PLAINS TWP	403721	0742125	105.00	150		403721074212501	231BRCK	33.00 150.00	H	W	19500221	25-00627		390270
390270	ELIZABETHTOWN W	ABERDEEN RD	SCOTCH PLAINS TWP	403723	0742319	130.00	350		403723074231901	231BRCK	65.00 350.00	P	W	19650301	25-12631		390271

UNIQUE ID	SITE OWNER	LOCAL ID	MUNICIPALITY	LAT	LON	ALTITUDE	DEPTH	DIAMETER	STATION ID	AQUIFER	SCREENED INTERVAL	W	S	DATE	PERMIT	DEPTH DRILLED	UNIQUE ID
390272	AMBERG, J JR	AMBERG 26381	SCOTCH PLAINS TWP	403736	0741945	55.00	209		403736074194501	231BRCK	68.00 200.00	I	W	19510728			390272
390273	SHACHAMAXON C C	SHACHAMAXON 2	SCOTCH PLAINS TWP	403741	0742111	90.00	301		403741074211101	231BRCK	22.00 301.00	R	W	195505			390273
390274	REMKER, C	REMKER 1	SCOTCH PLAINS TWP	403750	0742208	115.00	110		403750074220801	231BRCK	57.00 110.00	H	W	19521114			390274
390275	SPADER, C	SPADER GS 1	SCOTCH PLAINS TWP	403755	0742201	105.00	100		403755074220101	231BRCK	55.00 100.00	H	W	19530608			390275
390276	SPADER, C	SPADER 1	SCOTCH PLAINS TWP	403758	0742206	110.00	100		403758074220601	231BRCK	50.00 100.00	H	W	19530527			390276
390277	HIGHLAND SWIM C	HIGHLAND 1	SCOTCH PLAINS TWP	403803	0742214	120.00	150		403803074221401	231BRCK	50.00 150.00	R	W	19530710			390277
390278	HOWARTH, A	HOWARTH 1	SCOTCH PLAINS TWP	403808	0742151	120.00	110		403808074215101	231BRCK	33.00 110.00	H	W	19480315			390278
390279	SPADAFARA, F	SPADAFARA 1	SCOTCH PLAINS TWP	403810	0742201	130.00	100		403810074220101	231BRCK	55.00 100.00	H	W	19530625			390279
390280	ELIZABETHTOWN W	MORSE AVE	SCOTCH PLAINS TWP	403917	0742215	200.00	197		[illegible]	[illegible]	[illegible]			[illegible]			[illegible]
390281	ELIZABETHTOWN W	WATCHUNG	SCOTCH PLAINS TWP	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]			[illegible]			[illegible]

REFERENCE NO. 17

NUS CORPORATION	TITLE: THREE MILE VICINITY MAP
	SITE: L.A. DREYFUS CO., EDISON, N.J.
DATE: 7/17/89	
TDD: 02-8906-41	
QUAD: PLAINFIELD, N.J.	FIGURE NUMBER:
	SCALE: 1"= 2000'

REFERENCE NO. 18

Trube

MIDDLESEX COUNTY 208 AREA-WIDE

WASTE TREATMENT MANAGEMENT PLANNING

TASK 8 - GROUND-WATER ANALYSIS

A. DESCRIPTION OF GROUND-WATER SYSTEM
B. GROUND-WATER POLLUTION SOURCES

prepared by

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Consulting Ground-Water Geologists and Hydrologists
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Port Washington, New York 11050

November 1976

This report was prepared under a subcontract of the Middlesex 208 Joint Venture in cooperation with the Middlesex County Planning Board. The work was supported by funds provided to the Middlesex County Board of Chosen Freeholders by the U. S. Environmental Protection Agency, Region II, under EPA Grant No. P002102-01-0 as authorized by the Federal Water Pollution Control Act Amendments of 1972, PL 92-500.

HYDROGEOLOGIC FRAMEWORK

The study region is underlain by consolidated and unconsolidated rocks ranging in age from Precambrian to Recent. The northwestern part of the region covering about 160 square miles falls within the Triassic Lowland physiographic region and is underlain by sedimentary and igneous rocks. To the southeast lies the Coastal Plain, a region extending over some 220 square miles. The Coastal Plain is underlain by a thick wedge of sands, gravels, clays, and silts of Cretaceous age. These deposits were laid down by rivers in a deltaic environment and generally thicken in a downdip direction. Younger sediments overlie older sediments in a southeastward direction. The stratigraphic sequence of the various rock units together with their water-bearing properties is shown on Table 1.

Major ground-water reservoirs which are also the most heavily pumped are Triassic sandstones and shales of the Brunswick Formation and the Farrington and Old Bridge Sands of Cretaceous age. Aquifers of lesser importance are the Sayreville Sand, the Englishtown Sand, and the Mount Laurel and Wenonah Sands, all of Cretaceous age and the Pensauken Formation and glacial drift deposits of Pleistocene age.

The Triassic bedrock north of the Raritan River is overlain by sediments of glacial age. East of Plainfield, these deposits consist mostly of glacial till (unsorted sand, gravel, boulders and clay),but to the west and south, permeable glacial outwash deposits are present. The aquifers extend beyond the confines of the study region; the Triassic aquifer northward into Union County and westward across the Millstone River into Somerset County,and the

Table 1 - (Continued)

System	Unit	Lithologic description	Thickness (feet)	Water-bearing characteristics
Cretaceous	Magothy Formation	Fine lignitic sand and black clay	90 - 130	Not important as aquifer. Well yiel are low but sufficient for domestic purposes.
	Amboy Stoneware Clay	Gray to black clay with carbonaceous material	0 - 30	Considered to be lower facies of Mag thy Formation. Confining bed.
	Old Bridge Sand	Fine- to coarse-grained white to yellow sand	20 - 110	Major aquifer tapped by many wells. Median specific capacity is 20 gpm/ Transmissivity range 140,000 to 230,000 gpd/ft. Artificially recharg in places. Well yields 200 to 1,000 gpm.
	South Amboy Fire Clay	Varicolored clay	0 - 35	Confining bed.
	Sayreville Sand	Fine, white micaceous sand	0 - 40	Not continuous. Unimportant as aquifer.
	Woodbridge Clay	Gray clay and clayey sand	50 - 100	Major confining bed overlying Far-rington Sand.
	Farrington Sand	Gray to yellow fine- to medium-grained sand. Contains some clay layers.	30 - 150	Major aquifer tapped by many wells. Median specific capacity is 29 gpm/f Transmissivity range. 50,000 to 150,000 gpd/ft. Well yields 500 to 2,000 gpm.
	Raritan Fire Clay	Varicolored basal clay	0 - 90	Confining bed.
Triassic	Brunswick Formation (Newark Group)	Red shale interbedded with siltstone and sand-stone	5,000+	Major aquifer north of Raritan River. Specific capacity is 0.1 to 25 gpm/ft Transmissivity range 1,000 to 4,00C gpd/ft. Well yields 50 to 700 gpm.
	Lockatong Formation (Newark Group)	Hard shale and argillite	1,000+	Present only in small areas. Of little importance as aquifers.
	Stockton Formation (Newark Group)	Conglomerate and sandstone	1,000+	

Table 3. Ground-Water Pumpage in Middlesex 208 Area, New Jersey, 1969 and 1974 (in million gallons daily).

Water Company	Old Bridge Sand		Farrington Sand		Undifferentiated Sand		Newark Group		Total	
	1969	1974	1969	1974	1969	1974	1969	1974	1969	1974
PUBLIC SUPPLY										
Cranbury Township	-	-	-	-	0.121	0.123	-	-	0.121	0.123
East Brunswick Water Dept.	-	-	1.935	2.068	-	-	-	-	1.935	2.068
Edison Township	-	-	-	-	-	-	0.002	0	0.002	0
Forsgate Farms	0.123	0.057	-	-	-	-	-	-	0.123	0.057
Forsgate Water Company	-	0.136	0.242	0.468	-	-	-	-	0.242	0.604
Helme Products, Inc.	-	-	-	-	0.026	0.025	-	-	0.026	0.025
Kingston Water Company	-	-	-	-	-	-	0.121	0.114	0.121	0.114
Madison Township M.U.A.	0.541	1.173	2.096	3.127	-	-	-	-	2.637	4.300
New Jersey Water Company Jamesburg District	0.424	0.430	-	-	-	-	-	-	0.424	0.430
Reliable Water Company Monroe Township M.U.A.	0.118	0.315	-	-	-	-	-	-	0.118	0.315
Sayreville Water Dept.	2.462	2.717	1.003	0.753	-	-	-	-	3.465	3.470
So. Brunswick M.U.A.	-	-	0.814	1.698	-	-	0.090	0.055	0.904	1.753
Middlesex Water Company	-	-	-	-	-	-	13.447	3.944	13.447	3.944 [a]
South River Borough	0.259	0.370	0.864	1.247	-	-	-	-	1.123	1.617
City of Perth Amboy	7.839	6.975	2.974	3.016	-	-	-	-	10.813	9.991
Borough of Spotswood	0.524	0.609	-	-	-	-	-	-	0.524	0.609
City of South Amboy	0.390	0.551	0.682	0.541	-	-	-	-	1.072	1.092
N.J. State Home for Boys	-	-	0.136	0.144	-	-	-	-	0.136	0.144
Bound Brook Water Company	-	-	-	-	-	-	0.037	0.031	0.037	0.031
Elizabethtown Water Company	-	-	-	-	-	-	12.827	15.018	12.827	15.018
Total:	12.680	13.333	10.746	13.062	0.147	0.148	26.524	19.162	50.097	45.705

a) Includes pumpage from stratified drift

Plate 20. HYDRAULIC CHARACTERISTICS OF TRIASSIC AQUIFERS.

The map shows specific capacity data in gpm/ft (gallons per minute per foot) of drawdown for over 300 public supply, industrial, and domestic wells pumping from sandstones and shales of Triassic age (Newark Group) and from diabase. Also shown are several transmissivity and storage coefficient values for these rock units. The specific capacities range from less than 0.1 to 25 gpm/ft. One extremely high value of 84.2 gpm/ft can be explained by the fact that the well is partly screened in stratified drift which probably contributes a significant quantity of water, thereby resulting in the high specific capacity value.

The permeability of material covering the Triassic rock is also indicated. Generally where the Triassic rocks are overlain by permeable material (stratified drift), the specific capacities of wells drilled into the rock are greater than in areas where the bedrock is overlain by impermeable material (till) or where no cover exists. The reason for this is that the permeable material has a greater storage and infiltration capacity than the underlying rock, and precipitation which might have been lost as surface runoff is absorbed by the overlying unconsolidated sediments and slowly released as recharge to the bedrock. Also, where bedrock wells are drilled adjacent to surface-water bodies, the recharge effect of these reservoirs can increase the specific capacities of these wells making large yields possible. For example, several wells located around Spring Lake exhibit the recharging effects of both the lake and permeable cover in this area. Specific capacities range from 1.1 to 9.9 gpm/ft, considerably above the values of the majority of wells which are usually less than 1.0 gpm/ft.

REFERENCE NO. 19

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8906-41	7/18/89.	9:10 AM.

DISTRIBUTION: L.A. Dreyfus Company

BETWEEN:	OF:	PHONE:
	Middlesex Water Co.	(201) 634-1500

AND: Magda Trujillo

DISCUSSION

I obtained the folowing infromation:

a) The Middlesex Water Co. serves approximately to 250,000 people.

b) The estimated number of wells is 30 ±

c) The depth of the wells is estimated to be from 75-600 feet.

d) Almost all the ~~the~~ wells in the area are tapped into the Brunswick Shale Aquifer.

Magda Trujillo 7/18/89.

ACTION ITEMS:

NUS 067 REVISED 0685

REFERENCE NO. 20

NUS CORPORATION

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8810-13	6-8-89	1025

DISTRIBUTION:

SOUTH PLAINFIELD ASBESTOS DUMP

BETWEEN:	OF:	PHONE:
BOB KREILICK	SOMERVILLE WELL DRILLING Co.	(201) 725 4666

AND:

Richard Pagano (NUS)

DISCUSSION:

Mr Krelick informed me of the following:

- Almost all of the wells in the area are tapped into the Brunswick Shale aquifer.
- The bedrock in the vicinity of New Market Ave is approx 20 feet below ground surface
- The aquifer, throughout most of the area, is under unconfined conditions.
- Bound Brook is used for recreational purposes

Rich Pag
6-8-89

ACTION ITEMS:

NUS 087 REVISED 0681

REFERENCE NO. 21

NUS CORPORATION

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8810-13	6-8-89	0935

DISTRIBUTION:

SOUTH PLAINFIELD ASBESTOS DUMP

BETWEEN:	OF:	PHONE:
DONNA YUKOB	ELIZABETHTOWN WATER DEPARTMENT	(201) 7562155 (Transferred)

AND:

RICHARD PAGANO (NUS)

DISCUSSION:

I WAS INFORMED THAT THE ELIZABETHTOWN WATER DEPARTMENT SERVES APPROX. 150,000 people.

Rich Pagano
6-8-89

ACTION ITEMS:

THE WELLS ARE TAPPED INTO THE BRUNSWICK FORMATION & ARE LOCATED APPROX. 1.4 MILES NORTH OF THE SITE.

NUS 067 REVISED 0681

REFERENCE NO. 22

STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DAVID J. BARDIN, COMMISSIONER

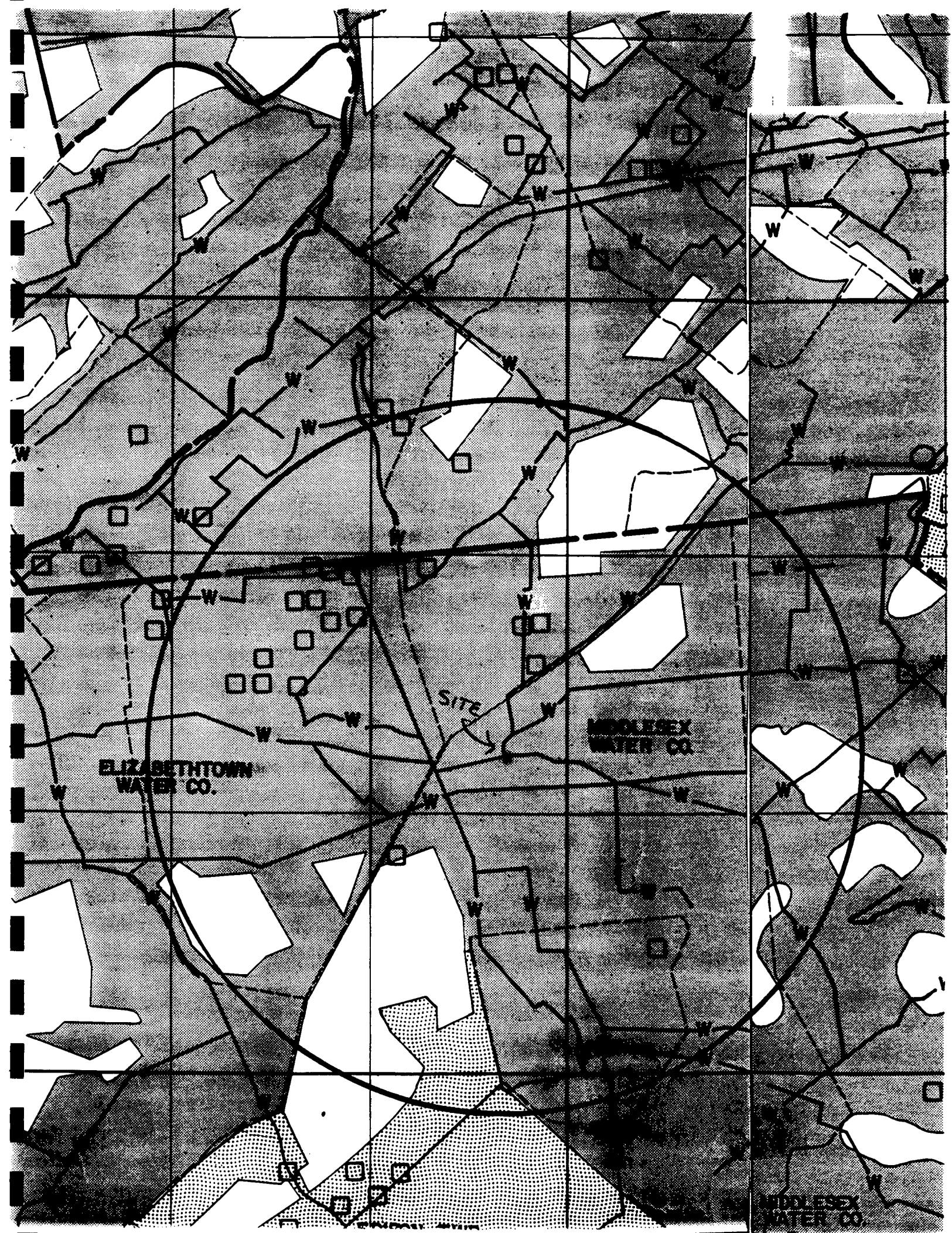
WATER SUPPLY OVERLAY
SHEET 25

STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DAVID J. BARDIN, COMMISSIONER

WATER SUPPLY OVERLAY
SHEET 26


SITE
ELIZABETHTOWN WATER CO.
MIDDLESEX WATER CO.
MIDDLESEX WATER CO.

REFERENCE NO. 23

competition, employment, investment, productivity, innovation, or the ability of United States enterprises to compete in domestic or export markets. Today's action only provides for an in-depth review of ground water protection measures, incorporating State and local measures whenever possible, for only these projects which request Federal financial assistance.

Dated: June 1, 1988.

Valdas V. Adamkus,

Regional Administrator.

[FR Doc. 88-14050 Filed 6-22-88; 8:45 am]

BILLING CODE 6560-50-M

[FRL-34029]

Sole Source Aquifer Determination for Fifteen Basin Aquifer Systems of New Jersey et al.

AGENCY: Environmental Protection Agency.

ACTION: Notice.

SUMMARY: In response to a petition from the New Jersey Department of Environmental Protection (NJDEP), notice is hereby given that the Region II Regional Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the 15 basin aquifer systems of northwest NJ, including the Delawanna Creek, Flat Brook, Lopatcong Creek, Millstone River, Musconetcong River, North Branch Raritan River, Papakating Creek, Paulins Kill, Pequest River, Pochuck Creek, Pohatcong Creek, South Branch Raritan River, Shimmers Brook, Van Campens Brook and Wallkill River Basin Aquifer Systems, underlying all of Warren County, NJ; and portions of Sussex, Passaic, Morris, Middlesex, Hunterdon, Mercer and Somerset Counties, NJ, and Orange County, NY, satisfy all determination criteria as a Sole Source Aquifer (SSA), pursuant to section 1424(e) of the Safe Drinking Water Act. The basin aquifer systems of northwest NJ are the sole source of drinking water for their aquifer service area; there are no viable alternative drinking water sources of sufficient supply; and, if contamination were to occur, it would pose a significant hazard to the public health.

As a result of this action, all Federal financially-assisted projects proposed for the area will be subject to EPA review to ensure that these projects are designed and constructed such that they do not bring about, or in any way contribute to, conditions creating a significant hazard to public health.

DATES: This determination shall be promulgated for purposes of judicial review at 1:00 p.m. Eastern time on July 7, 1988.

ADDRESSES: The data upon which these findings are based are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Office of Ground Water Management, Room 842, 26 Federal Plaza, New York, NY 10278.

FOR FURTHER INFORMATION CONTACT: John S. Malleck, Chief, Office of Ground Water Management, EPA Region II, 26 Federal Plaza, Room 842, New York, NY 10278, (212) 264-5635.

SUPPLEMENTARY INFORMATION:

I. Background

Section 1424(e) of the Safe Drinking Water Act (SDWA) (42 U.S.C. 300h-3(e), Pub. L. 93-523) states:

> If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of the determination in the Federal Register. After the publication of any such notice, no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

In November 1985, NJDEP petitioned EPA to declare the aquifer systems of the Coastal Plain, Piedmont, Highland, and Valley and Ridge Physiographic Provinces, as defined in the petition, a SSA under the provisions of the SDWA. The area specified in the petition submitted by NJDEP included the entire State of New Jersey except for the City of Trenton within the Coastal Plain and Piedmont Provinces in west-central New Jersey, and 69 communities within the Piedmont Province in northeast New Jersey.

In June 1987, NJDEP began to revise their petition to include only areas which were not designated previously, or petitioned for designation prior to their original petition. The revised petition uses a surface water drainage basin approach to define aquifer systems.

Initially 21 basin aquifer systems were to be included in the revised petition. However, the NJDEP determined that four of these were not eligible for SSA designation because of an insufficient ground water dependency. NJDEP developed the necessary documentation for the remaining 17. Subsequently, EPA determined that the NJDEP's ground water use methodology did not consider the entire aquifer service area populations. NJDEP revised the ground water use characterization to consider the entire aquifer service area, and another basin aquifer system was determined to be ineligible for SSA designation because of an insufficient ground water dependency. This reduced the number of basin aquifer systems under consideration to 16.

EPA determined that the Whippany River Basin, one of the 16, was already designated as part of the Buried Valley Sole Source Aquifer (45 FR 30537, May 8, 1980). Therefore, the area recommended for designation corresponds to the 15 basin aquifer systems of northwest New Jersey.

Public hearings were held on March 23, 1988 at the Sussex County Community College, Sparta, NJ, and on March 24, 1988 at the Hunterdon County Cooperative Extension Center, Flemington, NJ, in accordance with all applicable notification and procedural requirements. Most comments received during the comment period were in favor of designation.

II. Basis for Determination

Among the factors considered by the Regional Administrator as part of the technical review process for designating an area under section 1424(e) were: (1) Whether the aquifer is the sole or principal source (more than 50%) of drinking water for the defined aquifer service area, and that the volume of water available from all alternate sources is insufficient to replace the petitioned aquifer; and (2) whether contamination of the aquifer would create a significant hazard to public health. On the basis of technical information available to EPA at this time, the Regional Administrator has made the following findings in favor of designating the 15 basin aquifer systems of northwest NJ as a sole source aquifer:

1. The 15 basin aquifer systems supply more than 50 percent of the drinking water to their defined aquifer service area, and therefore, are the sole or principal source of drinking water for the residents of that area.

2. There are no reasonable alternative sources capable of supplying a sufficient quantity of drinking water to the population served by the petitioned aquifer systems.

3. The basin aquifer systems of northwest New Jersey are considered to be highly vulnerable to contamination, due to the thinness of the soils over much of the area, the shallow depth to

ground water, and the fractured nature of the bedrock. Potential sources of contamination include transportation routes, septic systems, highway, rural and urban run-off, commercial and industrial facilities, and agricultural practices. If the basin aquifer systems were to become contaminated, it would create an significant hazard to public health.

III. Description of the 15 Basin Aquifer Systems, Designated Area and Project Review Area

The basin aquifer systems underlie all of Warren County, NJ; and portions of Sussex, Passaic, Morris, Mercer, Hunterdon, Somerset and Middlesex Counties, NJ, and Orange County, NY. The aquifer systems are delineated by drainage basin divides, streams which serve as discharge points, and the northern boundary of the Coastal Plain Physiographic Province where it crosses the Millstone River Basin. The basin aquifer systems encompass approximately 1,735 square miles.

The Delawanna Creek Basin Aquifer System underlies a portion of Warren County. The area includes parts of the Townships of Blairstown, Knowlton, Hope, and White, and the Town of Belvidere.

The Flat Brook Basin Aquifer System underlies portions of Sussex and Warren Counties. The area includes parts of the Townships of Wantage, Montague, Sandyston, Frankford, Stillwater, and Walpack.

The Lopatcong Basin Aquifer System underlies a portion of Warren County. The area includes parts of the Townships of Greenwich, Harmony, Lopatcong, Oxford, Pohatcong, and White, the Borough of Alpha, and the Towns of Belvidere and Phillipsburg.

The Millstone River Basin Aquifer System underlies portions of Morris, Sussex, Warren, and Hunterdon Counties. The area includes all of Princeton Township and Hopewell, Princeton, Millstone, and Rocky Hill Boroughs; and parts of the Townships of Bridgewater, East Amwell, Franklin, Hillsborough, Hopewell, Lawrence, Montgomery, North Brunswick, Plainsboro, South Brunswick, West Amwell, and West Windsor, and the Boroughs of Manville and Pennington.

The Musconetcong River Basin Aquifer System underlies portions of Morris, Sussex, Warren, and Hunterdon Counties. The area includes all of Bloomsbury, Stanhope, and Hopat-cong Boroughs and the Town of Hackettstown; and parts of the Townships of Alexandria, Allamuchy, Bethlehem, Byram, Franklin, Green, Greenwich, Holland, Independence, Jefferson, Lebanon, Mansfield, Mount Olive, Pohatcong, Roxbury, Sparta, and Washington, the Boroughs of Glen Gardner, Hampton, Mount Arlington, Netcong, and Washington.

The North Branch Raritan River Basin Aquifer System underlines portions of Hunterdon, Morris and Somerset Counties. The area includes all of Bedminster Township and Chester, Lebanon and Peapack-Gladstone Boroughs; and parts of the Townships of Bernards, Branchburg, Bridgewater, Chester, Clinton, Hillsborough, Lebanon Mendham, Mine Hill Randolph, Readington, Roxbury, Tewksbury, and Washington, the Boroughs of Bernardsville, Califon, Far Hills, Mendham, Mount Arlington, Raritan, and Somerville, and the Town of Clinton.

The Papakating Creek Basin Aquifer System underlies a portion of Sussex County. The area includes parts of the Township of Frankford, Lafayette, Montague, Sandyston, and Wantage, and the Borough of Sussex.

The Paulins Kill Basin Aquifer System underlies portions of Warren and Sussex Counties. The area includes all of Hampton Township and Branchville Borough; and parts of the Townships of Andover, Blairstown, Frankford, Fredon, Frelinghuysen, Hardwick, Hardyston, Knowlton, Lafayette, Pahaquarry, Sandyston, Sparta, Stillwater, and Walpack, and the Town of Newton.

The Pequest River Basin Aquifer System underlies portions of Warren and Sussex Counties. The area includes all of Liberty Township and Andover Borough; and parts of the Townships of Allamuchy, Andover, Blairstown, Byram, Fredon, Frelinghuysen, Green, Hope, Independence, Knowlton, Mansfield, Oxford, Sparta Washington, and White, and Towns of Belvidere and Newton.

The Pochuck Creek Basin Aquifer System underlies portions of Sussex and Passaic Counties, NJ, and Orange County, NY. The area includes all of the Village of Warwick, NY; and parts of the Townships of Hardyston, Vernon, and West Milford, NJ and the Townships of Warwick and Chester, NY.

The Pohatcong Creek Basin Aquifer System underlies a portion of Warren County. The area includes all of Washington Borough; and parts of the Townships of Franklin, Greenwich, Harmony, Independence, Lopatcong, Mansfield, Oxford, Pohatcong, Washington, and White, and the Borough of Alpha.

The South Branch Raritan River Basin Aquifer System underlies portions of Warren, Hunterdon and Somerset Counties. The area includes all of Flemington and High Bridge Boroughs; and parts of the Township of Alexandria, Bethlehem, Branchburg, Chester, Clinton, Delaware, East Amwell, Franklin, Hillsborough, Lebanon, Mount Olive, Raritan, Readington, Roxbury, Tewksbury, Union, Washington, and West Amwell, the Town of Clinton, and the Boroughs of Califon, Glen Gardner, Hampton, and Mount Arlington.

The Shimmers Brook Basin Aquifer System underlies portions of Sussex County, NJ and Orange County, NY. The area includes parts of the Townships of Montague, Sandyston, Walpack, and Wantage, NJ, and the Township of Greenville and the City of Port Jervis, NY.

The Van Campens Brook Basin Aquifer System underlies portions of Warren and Sussex Counties. The area includes parts of the Township of Blairstown, Hardwick, Knowlton, Pahaquarry and Walpack.

The Wallkill River Basin Aquifer System underlies portions of Sussex County, NJ and Orange County, NY. The area includes all of the Village of Unionville, NY; and parts of the Townships of Andover, Byram, Hardyston, Jefferson, Lafayette, Montague, Sparta, Vernon, and Wantage, and the Boroughs of Franklin, Hamburg, Ogdensburg, and Sussex, NJ, and the Townships of Greenville, Minisink, Warwick, Wawayanda, Mount Hope, and Wallkill, NY.

The aquifer service areas for the Lopatcong Creek, Millstone River, Musconetcong River, North Branch Raritan River, Papakating Creek, Pequest River, Pohatcong Creek, South Branch Raritan River, Shimmers Brook, and the Wallkill River Basin Aquifer Systems extend beyond their aquifer system boundaries. Ground water from these basin aquifer systems is used by purveyors to supply people outside the aquifer system boundary. The population of all 15 aquifer service areas combined is approximately 600,000 people.

The recharge area for the 15 basin aquifer systems is the entire designated area. The streamflow source zone is defined as the upstream area of losing streams which flow into the recharge area. Except for the Millstone River, no streams flow into the recharge areas. In addition, all measurements indicate streams in the designated area are gaining streams. Therefore, there are no streamflow source zones for any of the 15 basin aquifer systems.

Only contaminants introduced in the recharge areas have the potential to affect the basin aquifer systems.

Therefore, the project review area is defined to include the entire designated area for the 15 basin aquifer systems.

Maps delineating the designated area and lists of the municipalities within each basin aquifer system are available, and may be obtained by contacting the person listed previously.

IV. Information Utilized in Determination

The information utilized in this determination included petition and background documentation submitted by the NJDEP, various U.S. Geological Survey and New Jersey State reports submitted with the petition, information contained in EPA files, and written and verbal comments from the public. These materials are available to the public and may be inspected during normal business hours at the address listed previously.

V. Project Review

Publication of this determination requires that EPA review proposed projects with Federal financial assistance in order to ensure that such projects do not have the potential to contaminate the 15 basin aquifer systems through their recharge zones so as to create a significant hazard to public health. In many cases, these projects may also be analyzed in an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA), 42 U.S.C. 4332(2)(c). All EISs, as well as any other proposed Federal actions affecting an EPA program, are required by Federal law (under the so-called "NEPA/309" process) to be reviewed and commented upon by the EPA Administrator.

In order to streamline EPA review of the possible environmental impacts on a designated sole source aquifer, when an action is to be analyzed in an EIS, the two reviews will be consolidated and both authorities cited. The EPA review under §1424(e) will therefore be included in the EPA review of the EIS (under NEPA).

VI. Summary and Discussion of Public Comments

Most public comments received expressed strong support for the designation of the 16 basin aquifer systems for which NJDEP developed the necessary documentation. Of the eleven persons or groups who submitted comments on the petition, only the New York State Department of Environmental Conservation (NYSDEC) opposed designation. NYSDEC's comments were specific to the portions of the basin aquifer systems which extend into NY. The reasons given for opposition are that (1) the basin aquifer systems which extend into NY are not listed as Primary Water Supply Aquifers by the State, and that designating such areas as a SSA distorts the State priority system; and (2) ground water flow in the Wallkill River Basin Aquifer System is north, from NJ into NY, and that any activities within the Wallkill River Basin in NY will have no impact on ground water quality in NJ.

In response to the above, (1) the Federal SSA program, as administered by EPA, is based on criteria independent of any State ground water program; and (2) it is Agency policy to, whenever possible, designate SSAs based on hydrogeologic rather than political boundaries because contamination of any portion of an aquifer can affect the downgradient portions of that aquifer. All information reviewed indicates that the ground water divide in this area will correspond with the drainage basin divide. For this reason, the first prominent divide in the NY portion of the Wallkill River Drainage Basin was used to define the northern boundary of the Wallkill River Basin Aquifer System.

One person expressed concern that the Whippany River Basin Aquifer System portion of the petition area overlaps the peviously designated Buried Valley Sole Source Aquifer. Review of designation documentation by Agency personnel confirmed that an overlap exists between the two areas. Therefore, the area recommended for designation does not include the Whippany River Basin Aquifer System.

Another person expressed concern that SSA designation may impede local solid waste management efforts. However, SSA designation provides for review of ground water protection measures for only those projects which request Federal financial assistance. Since solid waste management at the local level is not federally funded, such efforts will not be subject to review under the SSA program.

Another commentor requested that EPA expand the proposed designated area for the Wallkill River Basin Aquifer System in Orange County, New York. Insufficient information was submitted with their request to justify an expansion. Therefore, rather than delay designation of an area with sufficient documentation, EPA will proceed with designation of the area as petitioned.

VII. Summary

Today's action affects the 15 basin aquifer systems of northwest NJ, located in Warren, Sussex, Passaic, Morris, Mercer, Hunterdon, Somerset and Middlesex Counties, NJ, and Orange County, NY. Projects with Federal financial assistance proposed for all of Warren County, NJ; and portions of Sussex, Passaic, Morris, Mercer, Hunterdon, Somerset and Middlesex Counties, NJ, and Orange County, NY, will be reviewed to ensure that necessary ground water protection measures are incorporated into them.

Dated: June 10, 1988.

Christopher J. Daggett,

Regional Administrator, Environmental Protection Agency, Region II.

[FR Doc. 88-14155 Filed 6-22-88; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

Applications for Consolidated Hearing; Ebenezer Broadcasting Group, Inc., et al.

1. The Commission has before it the following mutually exclusive applications for a new TV station:

Applicant, city and state	File No.	MM Docket No.
A. Ebenezer Broadcasting Group, Inc., Guayama, PR.	BPCT-870331OI	88-291
B. Ministerio Radial Cristo Viene, Inc., Guayama, PR.	BPET-870505KG	

2. Pursuant to section 309(e) of the Communications Act of 1934, as amended, the above applications have been designated for hearing in a consolidated proceeding upon the issues whose headings are set forth below. The text of each of these issues has been standardized and is set forth in its entirety under the corresponding headings at 51 FR 19347, May 29, 1986. The letter shown before each applicants' name, above, is used below to signify whether the issue in question applies to that particular applicant.

Issue Heading and Applicant(s)

Short-spacing, A, B
Contingent environmental, A, B
Comparative, A, B
Ultimate, A, B
(See appendix)

3. If there is any non-standardized issue(s) in this proceeding, the full text of the issue and the applicant(s) to which it applies are set forth in an Appendix to this notice. A copy of the complete HDO in this proceeding is available for inspection and copying during normal business hours in the FCC Dockets Branch (Room 230), 1919 M

ERP No. D-MMS-A02224-00. Rating EO2, 1989 Central and Western Planning Areas Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Sales No. 118 and 122, Lease Offerings offshore the coast of Alabama, Mississippi, Louisiana and Texas.

Summary

EPA expressed objections to the proposed action of unrestricted leasing in the Central and Western Gulf. EPA also expressed concern over the lack of any proposed mitigation for possible impacts to deep-water benthic communities. EPA also expressed concern that ozone modeling of the effect of offshore emission on onshore air quality be conducted.

ERP No. D-NPS-K61095-NV. Rating LO. Death Valley National Monument, General Management Plan, Implementation, Inyo and San Bernardino Counties, CA and Nye and Esmeralda Counties, NV.

Summary

EPA expressed a lack of objections to the proposed management plan but noted that future multiple use activities (mining, campgrounds) will require an assessment of air quality, surface water and ground water impacts.

Final EISs

ERP No. F-COE-H30000-IA. Des Moines Recreational River and Greenbelt Area, Development, Operation and Maintenance, Des Moines River, Webster, Hamilton, Boone, Dallas, Polk, and Warren Counties, IA.

Summary

EPA has no objections to this project with the understanding that each unit of the project will be evaluated separately for NEPA compliance at a later date.

ERP No. F-FHW-F40290-WI, WI-TH-83 Improvement, I-94 to Cardinal Lane/WI-TH-16, Funding and 404 Permit, Waukesha County, WI.

Summary

EPA has no objection to this project, long as a minimum of 0.8 acre of additional wetlands are created.

(Note: The above summary should have appeared in the 6-10-88 Federal Register Notice.)

ERP No. F-USN-C85041-NJ, Colts Neck, Naval Weapons Station Earle Family Housing Development, Construction, Mammouth County, NJ.

Summary

EPA's concern regarding the location of the mitigation site has been addressed in this document. In addition, information within the document clarified our questions with respect to the delineation of wetlands, and the point of discharge of the wastewater treatment plant. Accordingly, EPA has no unresolved concerns regarding the implementation of the project as proposed.

ERP No. F-USN-D84005-VA, Empress II Operation, Electromagnetic Pulse, Radiation Environment Simulator for Ships, Chesapeake Bay (West of Bloodsworth Island) and Atlantic Ocean (Virginia Capes Operating Area), off the Coast of VA.

Summary

EPA expressed a preference for the proposed site and requested a thorough monitoring program for the project.

(Note: The above summary should have appeared in the 6-17-88 Federal Register Notice.)

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14353 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[ER-FRL-3404-3]

Environmental Impact Statements; Availability; Weekly Receipts

Responsible Agency: Office of Federal Activities, General Information (202) 382-5073 or (202) 382-5075. Availability of Environmental Impact Statements Filed June 13, 1988 Through June 17, 1988. Pursuant to 40 CFR 1506.9.

EIS No. 880189, Draft, BLM, AZ, San Pedro River Riparian Resource Management Plan, Implementation, San Simon Resource Area, Safford District, Cochise County, AZ, Due: September 21, 1988, Contact: Jerrold Coolidge (602) 428-4040.

EIS No. 880190, Draft, DOE, ND, Charlie Creek-Belfield 345 kV Transmission Line Project, Construction, Operation and Maintenance, Implementation, Billings, Stark, McKenzie and Dunn Counties, ND, Due: August 8, 1988, Contact: James D. Davis (406) 657-5525.

EIS No. 880191, Draft, SCS, MD, East Yellow Creek Watershed, Soil Erosion and Flood Damage Reduction Plan, Funding and Implementation, Sullivan, Linn and Chariton Counties, MO, Due: August 8, 1988, Contact: Russell C. Mills (314) 875-5214.

EIS No. 880192, Draft, NPS, AK, Denali National Park and Preserve, Wilderness Recommendations, Designation or Nondesignation, AK, Due: August 29, 1988, Contact: Linda Nebel (907) 257-2654.

EIS No. 880193, Draft, APS, WY, Little Bighorn River, Wild and Scenic River Study, National Wild and Scenic Rivers System, Designation, Bighorn National Forest, Sheridan County, WY, Due: September 22, 1988, Contact: Arthur Bauer (307) 672-6751.

EIS No. 880194, Draft, USN, PA, U.S. Navy Girard Point Site, Sale to the Philadelphia Muncipal Authority for the Establishment of a Steam Generation Facility that Produces Steam for Purchase by the U.S. Navy, City of Philadelphia, PA, Due: August 12, 1988, Contact: Kenneth Petrone (215) 897-6431.

EIS No. 880195, Final, FHW, PA, PA-23/New Holland Avenue/LR-1124, Section 801 Relocation, US 30 to Walnut and Chestnut Streets, Funding and 404 Permit, Manheim, East Lampeter and Lancaster Townships and the City of Lancaster, Lancaster County, PA, Due: July 25, 1988, Contact: Philibert A. Quellet (717) 782-4422.

EIS No. 880196, Draft, FRC, REG, Regulations Governing Independent Power Producers (RM88-4-000) and Regulations Governing Bidding Programs (RM88-5-000), Implementation, Due: August 15, 1988, Contact: Gilda Rodriquez (202) 357-0155.

EIS No. 880197, Draft, SCS, MS, Whites Creek, Watershed Protection and Flood Prevention Plan, Funding, Possible 404 Permit and Implementation, Webster County, MS, Due: August 8, 1988, Contact: L. Peter Heard (601) 965-5205.

EIS No. 880198, Draft, EPA, FL, CF Mining Complex II, Open Pit Phosphate Mine and Beneficiation Plan, Construction and Operation, NPDES and 404 Permits, Hardee County, FL, Due: August 8, 1988, Contact: Maryann Gerber (404) 347-3776.

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14352 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[FRL-3340-F]

New Jersey Coastal Plain Aquifer System, New Jersey Sole Source Aquifer Final Determination

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice.

SUMMARY: Notice is hereby given that, pursuant to section 1424(e) of the Safe Drinking Water Act, the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the

New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plan Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, and that the acquifer, if contaminated, would create a significant hazard to public health. As a result of this action EPA will review Federally-assisted projects (projects which receive Federal financial assistance through a grant, contract, loan guarantee, or otherwise) proposed for construction in a project review area which includes the New Jersey Coastal Plain Area and a portion of the aquifer streamflow source zone. The streamflow source zone includes upstream portions of the Delaware River Basin in the States of Delaware, New Jersey, New York and Pennsylvania. Federally-assisted projects will be reviewed to ensure that they are designed and constructed so that they do not create a significant hazard to public health. Projects outside of the project review area but within the streamflow source zone will be reviewed if they require an Environmental Impact Statement (EIS).

DATES: This determination shall be promulgated for purposes of judicial review at 1:00 P.M. Eastern Time on July 7, 1988. This determination shall become effective on August 8, 1988.

ADDRESSES: The data on which these findings are based, detailed maps of the New Jersey Coastal Plain Area and the project review area, a compilation of public comments and the Agency's response to those comments, are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Water Management Division, 26 Federal Plaza, New York, New York 10278. In addition, copies of a map showing the designated area and a responsiveness summary to public comment are available upon request.

FOR FURTHER INFORMATION CONTACT: John Malleck, Chief, Office of Ground Water Management, Water Management Division, 26 Federal Plaza, New York, New York 10278 (212) 264-5635.

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to section 1424(e) of the Safe Drinking Water Act (42 U.S.C., 300f, 300h-3(e), Pub. L. 93-523), the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plain Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey. Pursuant to section 1424(e), Federally-assisted projects proposed for construction in the New Jersey Coastal Plain Area and the project review area within portions of its streamflow source zone will be subject to EPA review. The streamflow source zone for the New Jersey Coastal Plain Aquifer System includes upstream portions of the Delaware River Basin in the States of Delaware (New Castle County), New Jersey (Mercer-part, Hunterdon-part, Sussex-part, and Warren Counties), New York (Delaware, Orange, Sullivan and Ulster Counties), and Pennsylvania (Berks-part, Bucks, Carbon-part, Chester-part, Delaware, Lackawanna-part, Lancaster, Lehigh, Luzerne-part, Monroe Montgomery, Northampton, Philadelphia, Pike, Schuykill and Wayne Counties). The project review area includes that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties).

I. Background

Section 1424(e) of the Safe Drinking Water Act states: (e) If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to a plan or design the project to assure that it will not so contaminate the aquifer.

On December 4, 1978 the Environmental Defense Fund, Inc. and the Sierra Club New Jersey Chapter petitioned the EPA Administrator to determine that the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, constitute an area whose aquifer system is "the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health." On March 21, 1979, EPA published the petition in the Federal Register. Public hearings on the petition request were held May 1, 15 and 17, 1979 in Lindenwold, Trenton, Freehold and Pomona, New Jersey. A May 19, 1983 Federal Register notice announced the availability of additional technical information and the extension of public comment period to July 15, 1983.

II. Basis for Determination

Among the factors to be considered by the Administrator in connection with the designation of an area under section 1424(e) are:

(1) Whether the aquifer is the area's sole or principal source of drinking water and (2) whether contamination of the aquifer would create a significant hazard to public health.

On the basis of information available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

(1) The New Jersey Coastal Plain Area depends upon the underlying Coastal Plain Aquifer System for seventy-five (75) per cent or more of its drinking water to serve 3 million people.

(2) Data show that the formations of the New Jersey Coastal Plain Area are hydrologically interconnected such that they respond collectively as an interrelated aquifer system.

(3) If the aquifer system were to become contaminated, exposure of the persons served by the system would constitute a significant hazard to public health.

(4) Alternative supplies capable of providing fifty (50) per cent or more of the drinking water to the designated area are not available at similar economic costs.

The New Jersey Coastal Plain Aquifer System is highly susceptible to contamination through its recharge zone from a number of sources, including but not limited to, chemical spills, leachate from landfills, stormwater runoff, highway de-icing, faulty septic systems wastewater treatment systems and waste disposal lagoons. The aquifer is also susceptible to contamination to a lesser degree from the same sources, through its streamflow source zone. Since ground-water contamination can be difficult or impossible to reverse

completely and since the acquifer in this area is solely or principally relied upon for drinking water purposes by the population of the New Jersey Coastal Plain Area, contamination of the aquifer could pose a significant hazard to public health.

III. Description of the New Jersey Coastal Plain Area Aquifer System, Its Recharge Zone and Its Streamflow Source Zone

The New Jersey Coastal Plain Aquifer System consists of a wedge-shaped mass of unconsolidated sediments composed of clay, silt, sand and gravel. The wedge thins to a feathered edge along the Fall Line and attains a thickness of over 6,000 feet at the tip of Cape May County, New Jersey.

These sediments range in age from Cretaceous to Holocene and can be classified as continental, coastal or marine deposits. There are five major aquifers within the Coastal Plain Aquifer System. They are the Potomac-Raritan-Magothy Aquifer System, Englishtown Aquifer, Wenonah-Mount Laurel Aquifer, Kirkwood Aquifer and the Cohansey Aquifer. Natural recharge to the New Jersey Coastal Plain Aquifer System occurs primarily through direct precipitation on the outcrop area of the geologic formations. A smaller component of natural recharge to the deeper layers of the system occurs by vertical leakage from the upper layers. This accounts for a small percentage of the total amount of recharge; however, over a large area and a long period of time the amount of water transmitted can be significant.

The New Jersey Coastal Plain Aquifer discharges to the surface through streams, springs and evapotranspiration. Many streams ultimately flow into bays or directly into the ocean. Development of the ground-water reservoir as a water supply source constitutes another discharge component which today accounts for a significant portion of discharge from the overall system. In certain areas (e.g. along the Delaware River) heavy pumping has caused a reversal in the normal discharge from the aquifer (Raritan-Magothy) such that the surface stream (Delaware River) now recharges the aquifer. This phenomenon implies that, in addition to the New Jersey Coastal Plain Area, the Delaware River Basin within Delaware, New Jersey, Pennsylvania and New York must be regarded as a streamflow source zone (an upstream headwaters area which drains into a recharge zone), which flows into the Coastal Plain Area.

IV. Information Utilized in Determination

The information utilized in this determination includes the petition, written and verbal comments submitted by the public, and various technical publications. The above data are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Water Management Division, 26 Federal Plaza, New York, New York 10278.

V. Project Review

When the EPA Administrator publishes his determination for a sole or principal drinking water source, no commitment for Federal financial assistance may be may if the Administrator finds that the Federally-assisted project may contaminate the aquifer through a recharge zone so as to create a significant hazard to public health . . . Safe Drinking Water Act section 1424(e), 42 U.S.C. 300h–3(e). In many cases, these Federally-assisted projects would also be analyzed in an "Environmental Impact Statement" (EIS) under the National Environmental Policy Act (NEPA), 42 U.S.C. 4332(2)(C). All EISs, as well as any other proposed Federal actions affecting an EPA program or responsibility, are required by Federal law (under the so-called "NEPA/309" process) [1] to be reviewed and commented upon by the EPA Administrator. Therefore, in order to streamline EPA's review of the possible environmental impacts on designated aquifers, when an action is analyzed in an EIS, the two reviews will be consolidated, and both authorities will be cited. The EPA review (under the Safe Drinking Water Act) of Federally-assisted projects potentially affecting sole or principal source aquifers, will be included in the EPA review (under the "NEPA/309" process) of any EIS accompanying the same Federally-assisted project. The letter transmitting EPA's comments on the final EIS to the lead agency will be the vehicle for informing the lead agency of EPA's actions under section 1424(e).

All Federally-assisted proposed projects will be reviewed, within the New Jersey Coastal Plain Area (Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland and Cape May, and portions of Mercer and Middlesex Counties, New Jersey (as delineated on maps included in the petition), and that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties) (as delineated on maps included in the public record). Outside the New Jersey Coastal Plain Area and further than two miles from the Delaware River in the streamflow source zone, only those Federally-assisted proposed projects requiring the preparation of an EIS will be reviewed. The Agency has chosen a two-mile limit for the project review area along the Delaware River based on the climate and hydrologic setting of the area. The two-mile distance is consistent with the two-mile review radius included in the EPA guidelines for Ground-Water Classification and is protective of human health.

VI. Summary and Discussion of Public Comments

There has been much controversy over the possible designation of this aquifer system. The majority of the comments from the original 1979 public hearings were in direct opposition to such a designation. More than half of all responses received were against designation. Several commenters felt constrained by the original comment period and thereby requested an extension. EPA complied with this request on two occasions, once by announcing at the four public hearings it held throughout the area under consideration that the agency had extended the formal comment period from May 14, 1979, to December 31, 1979, and again in a May 19, 1983 Federal Register Notice that announced the availability of additional information and extension of the public comment period to July 15, 1983. Although a number of ground-water protection measures are available at the Federal, State and local level, none of these, either individually or collectively, permit EPA to act as directly as would a sole source aquifer designation in the review and approval of Federally-assisted projects. In addition, EPA feels that the sole source project review process will foster integration rather than duplication of environmental review efforts. Memoranda of Understanding have been negotiated with various Federal agencies with the purpose of streamlining the review process and minimizing project delays. Most of the commenters expressed concern that a

[1] 42 U.S.C. § 7609 requires EPA to conduct this review. The "309" in a "NEPA/309" derives from the original source of this general requirement: Section 309 of the Clean Air Act.

designation would be a duplication of efforts already existing on the state and local levels. Some commenters felt that a sole source aquifer designation would give EPA the power to reject any applications for Federally-funded projects indiscriminately and to delay any project underway. Another main concern of many commenters was that a designation would cause a strong negative economic impact on the area in question and curtail needed development, thus eliminating jobs. EPA is sympathetic to the concerns of the commenters; however, the Agency feels that a sole source aquifer designation would not interfere with economic development. Federal financial assistance will be withheld only in those instances where it is determined that a proposed project may contaminate the acquifer so as to create a significant hazard to public health and no acceptable remedial measures are available to prevent the potential hazard.

Dated: June 16, 1988.

Lee M. Thomas,

Administrator.

[FR Doc. 88-14293 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[OPTS-59845; FRL-3404-5]

Toxic and Hazardous Substances; Certain Chemicals Premanufacture Notices

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Section 5(a)(1) of the Toxic Substances Control Act (TSCA) requires any person who intends to manufacture or import a new chemical substance to submit a premanufacture notice (PMN) to EPA at least 90 days before manufacture or import commences. Statutory requirements for section 5(a)(1) premanufacture notices are discussed in the final rule published in the Federal Register of May 13, 1983 (48 FR 21722). In the Federal Register of November 12, 1984 (49 FR 46066) (40 CFR 723.250), EPA published a rule which granted a limited exemption from certain PMN requirements for certain types of polymers. Notices for such polymers are reviewed by EPA within 21 days of receipt. This notice announces receipt of nine such PMNs and provides a summary of each.

DATES: Close of Review Periods:

Y 88-192, 88-193—June 5, 1988.
Y 88-194—June 7, 1988.
Y 88-195—May 17, 1988.
Y 88-196—June 8, 1988.
Y 88-197—June 14, 1988.
Y 88-198—June 16, 1988.
Y 88-199—June 10, 1988.
Y 88-200—June 23, 1988.

FOR FURTHER INFORMATION CONTACT: Stephanie Roan, Premanufacture Notice Management Branch, Chemical Control Division (TS-794), Office of Toxic Substances, Environmental Protection Agency, Rm. E-611, 401 M Street SW., Washington, DC 20460 (202) 382-3725.

SUPPLEMENTARY INFORMATION: The following notice contains information extracted from the non-confidential version of the submission provided by the manufacturer on the PMNs received by EPA. The complete non-confidential document is available in the Public Reading Room NE-G004 at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding legal holidays.

Y 88-192

Manufacturer. Confidential.
Chemical. (G) Hydroxy function acrylic resin.
Use/Production. (S) Coatings. Prod. range: Confidential.

Y 88-193

Manufacturer. Confidential.
Chemical. (G) Polyurethane resin.
Use/Production. (S) Coating. Prod. range: Confidential.

Y 88-194

Manufacturer. Sybron Chemicals Inc.
Chemical. (G) Copolymer of aliphatic esters of 2-propenoic acid with homocyclic and heterocyclic aromatic vinyl compounds, reaction production wiyh aliphatic polyam ne.
Use/Production. (G) Waste and process water purification. Prod. range: Confidential.

Y 88-195

Manufacturer. Confidential.
Chemical. (G) Dibasic acid polyol polyester.
Use/Production. (G) Used in coatings. Prod. range: Confidential.

Y 88-196

Manufacturer. Confidential.
Chemical. (S) Rosin, dicyclopentadiene, dimer fatty acid polymer.
Use/Production. (S) Printing ink vehicles. Prod. range: 3,000,000-3,700,000 kg/yr.

Y 88-197

Manufacturer. Reichhold Chemicals Inc.
Chemical. (G) Sunflower oil alkyd.
Use/Production. (S) Architectural trade sales coating. Prod. range: Confidential.

Y 88-198

Manufacturer. Confidential.
Chemical. (G) Aliphatic polyester urethane.
Use/Production. (G) Coatings. Prod. range: Confidential.

Y 88-199

Manufacturer. C.J. Osborn.
Chemical. (G) Polyester.
Use/Production. (S) Pigmented and clear finish. Prod. range: Confidential.

Y 88-200

Manufacturer. Confidential.
Chemical. (G) Styrene/acrylic copolymer.
Use/Production. Coatings and inks. Prod. range: Confidential.

Date: June 13, 1988.

Steve Newburg-Rinn,

Acting Chief, Public Data Branch, Information Management Division, Office of Toxic Substances.

[FR Doc. 88-14292 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

Public Information Collection Requirement Submitted to Office of Management and Budget for Review

June 16, 1988.

The Federal Communications Commission has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1980 (44 U.S.C. 3507).

Copies of this submission may be purchased from the Commission's copy contractor, International Transcription Service, (202) 857-3800, 2100 M Street NW., Suite 140, Washington, DC 20037. For further information on this submission contact Judy Boley, Federal Communications Commission, (202) 632-7513. Persons wishing to comment on this information collection should contact Yvette Flynn, Office of Management and Budget, Room 3235 NEOB, Washington, DC 20503, (202) 395-3785.

OMB Number: 3060-0025.
Title: Application for Restricted Radiotelephone Operator Permit—Limited Use.
Form Number: FCC 753.
Action: Revision.
Respondents: Individuals or households.

REFERENCE NO. 24

Mailing Address
P.O. Box 1500
Iselin, New Jersey 08830

MIDDLESEX WATER COMPANY / 1500 Ronson Road, Woodbridge Township, Iselin, New Jersey 08830
201 - 634-1500

October 21, 1985

Mr. David J. Grupp
NUS Corporation
Raritan Plaza III,
Fieldcrest Avenue
Edison, New Jersey 08837

Dear Mr. Grupp:

In response to your letter of October 8, 1985 requesting information on our Park Avenue well field, following are the answers to your questions:

1. Number of wells: See attached.
2. Aquifer at which screened: See depths on attached.
3. Population served: 196,888 as of 12/31/84.
4. Depth of wells: See tabulation on attached.
5. Gallons pumped per day: Average of 5,155,000 per day.

Yours very truly,

MIDDLESEX WATER COMPANY

J. Richard Tompkins

J. Richard Tompkins
President

JRT:ne

Attachment

cc: H. T. Grundmann
J. A. Ritter

(Doc. 0429B)

NAME OF UTILITY

SURFACE WATERS

NAME OR LOCATION OF SOURCE OR RESERVOIR (a)	DAM			INTAKES			LENGTH OF INTAKE (h)	FLOW LINE ELEVATION (i)	WITHDRAWAL IN MILLION GALLONS PER DAY				WATER SURFACE AREA (Acres) (n)	RESERVOIR CAPACITY MILLION GALLONS (o)	YEAR IN SERVICE (p)
									MAXIMUM		MINIMUM				
	KIND OR TYPE (b)	LENGTH (FT.) (c)	CENTER HT. (FT.) (d)	NO. (e)	KIND (f)	SIZE (g)			MONTH (j)	QUAN. (k)	MONTH (l)	QUAN. (m)			
Robinson's Branch (Earth and Concrete)	-	550	25	1	Cast Iron	24"	50'	44.0	-	-	-	-	94	232	1906
Delaware and Raritan Canal	-	-	-	2	Conc	54"	56'	14.0	Nov.	21.3	Jan.	7.1	-	-	1969

Aggregate Total Average Daily Withdrawal ..... 13,395 ..... Million Gals.

GROUND WATERS

LOCATION OF SOURCE OF SUPPLY (a)	TYPE OF SOURCE (b)	EACH GROUP (c)	DIMENSIONS OF COLLECTORS, WELLS OR GALLERIES		DEPTH FROM GROUND SURFACE TO WATER LEVEL		WITHDRAWAL IN THOUSAND GALLONS PER DAY				YEAR IN SERVICE (l)
							MAXIMUM		MINIMUM		
			DIAM. OR SIZE (d)	LENGTH OR DEPTH (e)	STATIC LEVEL (f)	PUMPING LEVEL (g)	MONTH (h)	QUANTITY (i)	MONTH (j)	QUANTITY (k)	
			Inches	Feet							
Park Ave-So. Plfd.	Well #14	1	10	259	Varies	Varies)	(Observation Well - 1965)				1927
" " " "	Well #18	1	12	74	"	")					1946
" " " "	Well #19	1	12	76	"	")					1946
" " " "	Well #20	1	12	82	"	")					1948
" " " "	Well #21	1	12	73	"	")					1950
" " " "	Well #22	1	12	514	"	")					1961
" " " "	Well #23	1	18	74	"	")					1961
" " " "	Well #24	1	24)	58)	"	")					1954
" " " "			20)	10)	"	")					
" " " "			12)	35)	"	")					
" " " "	Well #25	1	12	448	"	")					1955
" " " "	Well #26	1	12	495	"	")					1965
" " " "	Well #27	1	12	501	"	")					1965
" " " "	Well #28	1	12	500	"	")					1965
" " " "	Well #29	1	12	500	"	")					1965
" " " "	Well #30	1	12	500	"	")					1966
" " " "	Well #31	1	12	500	"	")					1966
" " " "	Well #32	1	12	501	"	")	Aug.	7,979	March	9	1966
(Continued on Page 48A)											

Aggregate Total Average Daily Withdrawal ..... (See Page 48A) ..... Thousand Gals.

YEAR

REFERENCE NO. 25

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
03-9512-01	6/19/86	1120

DISTRIBUTION: File (Heller Properties)

BETWEEN:	OF:	PHONE:
City Engineer	Township of Edison	(201) 287-0900

AND: D-LAMOND (NUS)

DISCUSSION:

Water supply for Edison. There are several public supply wells located in Edison however they are not utilized except in an emergency as backup supplies. Water Co. in Edison just distributes water from the Elizabethtown Water Co. There are other wells in area (private wells) which are used for irrigation and, industry and monitoring.

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE NO. 26

GEMS> I

L.A. DREYFUS
LATITUDE 40:34:27 LONGITUDE 74:23: 9 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	0	5494	19257	47281	95799	167831
RING TOTALS	0	0	5494	19257	47281	95799	167831

GEMS> I

L.A. DREYFUS
LATITUDE 40:34:27 LONGITUDE 74:23: 9 1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	0	0	1604	5611	15418	31668	54301
RING TOTALS	0	0	1604	5611	15418	31668	54301

Distance (In Miles)	Population	Houses
1/4	266	70
1/2	1,140	300
1	7,235	1,904
2	28,557	7,515
3	87,454	22933
4	2074,838	54,601

REFERENCE NO. 27

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
	11/14/85	2:30

DISTRIBUTION:

L.R. METAL : FILE.

BETWEEN:	OF:	PHONE:
BOB STEWART	NJDEP FISH GAME & WILDLIFE	(201) 236-2118

AND:

David GRUPP (NUS)

DISCUSSION:

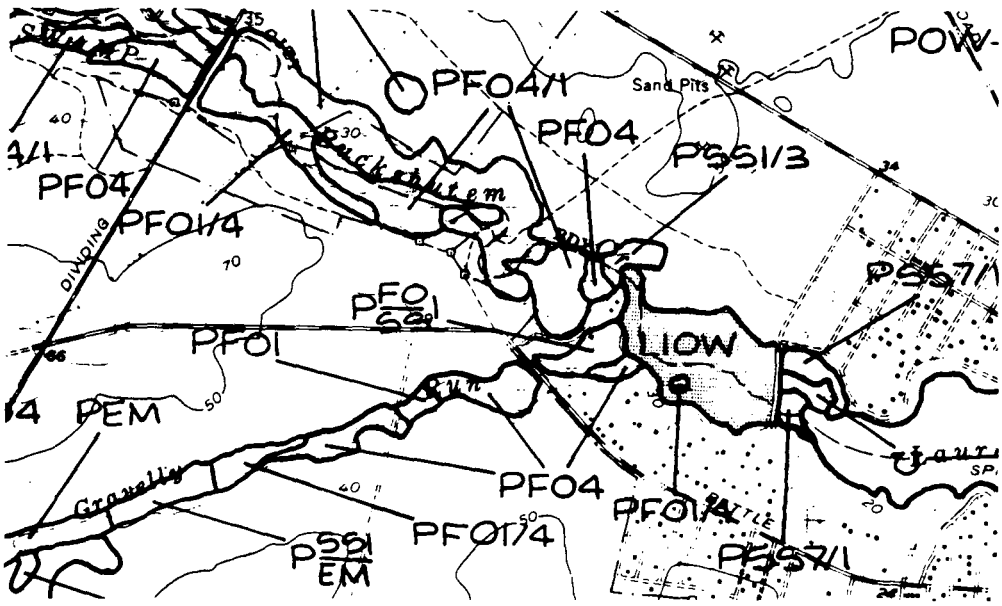
Type of Activities on Round Brook.
Recreational - stock sunfish & Bullheads.
Recently had several Fishing Derby's

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE NO. 28

ATLAS
OF
NATIONAL WETLANDS INVENTORY MAPS
FOR
NEW JERSEY



PORTION OF DIVIDING CREEK MAP

SCALE: 1:24,000

UNITED STATES
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Region Five
Habitat Resources
One Gateway Center, Suite 700
Newton Corner, Massachusetts

1984

HOW TO USE THIS ATLAS

The Atlas contains reductions of all 1:24,000 National Wetlands Inventory maps. Maps appear in alphabetical order. Map names can be located on the index map (Figure 2). Each map shows the configuration, location and type of wetlands and deepwater habitats found within a given area.

WETLAND LEGEND

Wetland data are displayed on maps by a series of letters and numbers (alpha-numerics). Mixing of classes and subclasses are represented by a diagonal line. The more common symbols are shown below; less common symbols have been omitted for simplicity. For identifying these latter symbols, the reader should refer to an actual NWI map legend.

Examples of Alpha-numerics:

E2EMN6	=	Estuarine (E), Intertidal(2), Emergent Wetland(EM), Regularly Flooded(N), Oligohaline(6)
E2FL	=	Estuarine(E), Intertidal(2), Flat(FL)
PF01	=	Palustrine(P), Forested Wetland(FO), Broad-leaved Deciduous(1)
PEM/OW	=	Palustrine(P), Emergent Wetland/Open Water(EM/OW)
PFO/SS1	=	Palustrine(P), Forested Wetland/Scrub-Shrub Wetland(FO/SS), Broad-leaved Deceduous(1)

SYMBOLOGY

Systems and Subsystems:

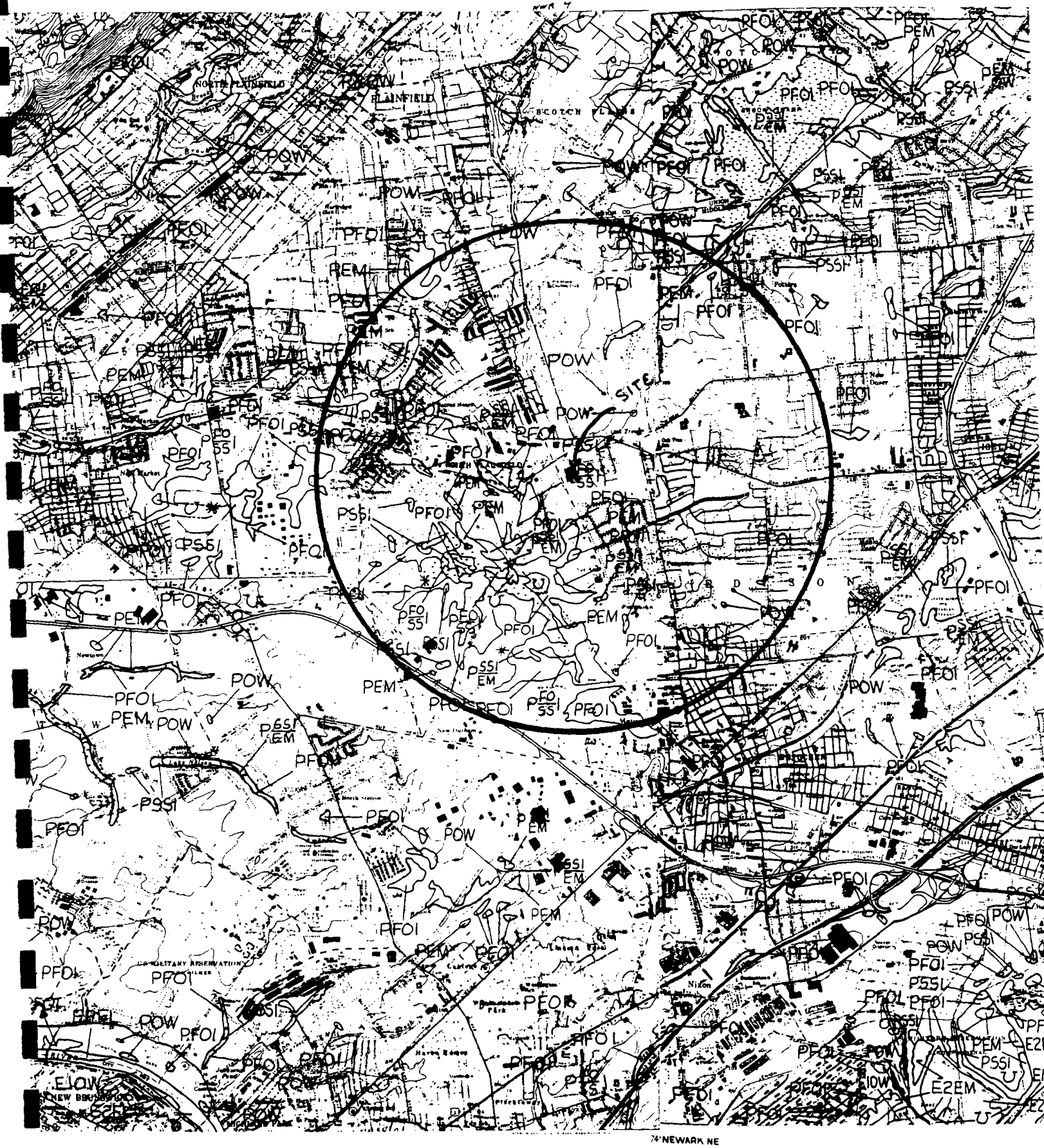
M 1	=	Marine Subtidal	R 3	=	Riverine Upper Perennial
M 2	=	Marine Intertidal	R 4	=	Riverine Intermittent
E 1	=	Estuarine Subtidal	L 1	=	Lacustrine Limnetic
E 2	=	Estuarine Intertidal	L 2	=	Lacustrine Littoral
R 1	=	Riverine Tidal	P	=	Palustrine
R 2	=	Riverine Lower Perennial	U	=	Upland

Classes (subclasses and modifers designated where appropriate):

AB	=	Aquatic Bed
BB	=	Beach/Bar
EM	=	Emergent Wetland
EMN6	=	Emergent Wetland, Regularly Flooded, Oligohaline
EMP6	=	Emergent Wetland, Irregularly Flooded, Oligohaline
EMR	=	Emergent Wetland, Seasonally Flooded-Tidal
FL	=	Flat
FO1	=	Forested Wetland, Broad-leaved Deciduous
FO2	=	Forested Wetland, Needle-leaved Deciduous
FO4	=	Forested Wetland, Needle-leaved Evergreen
OW	=	Open Water/Unknown Bottom
SS1	=	Scrub=Shrub Wetland, Broad-leaved Deciduous
SS3	=	Scrub-Shrub Wetland, Broad-leaved Evergreen
SS4	=	Scrub-Shrub Wetland, Needle-leaved Evergreen
SS5	=	Scrub-Shrub Wetland, Dead
SS7	=	Scrub-Shrub Wetland, Evergreen

NATIONAL WETLANDS INVENTORY
UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL
UNITED STA



PLAINFIELD N J

74 NEWARK NE
NEWARK

REFERENCE NO. 29

Endangered & Threatened Wildlife and Plants

APRIL 10, 1987

50 CFR 17.11 & 17.12

Title 50—Wildlife and Fisheries

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

* * * * *

Subpart B—Lists

Source: 48 FR 34182, July 27, 1983, unless otherwise noted.

§ 17.11 Endangered and threatened wildlife.

(a) The list in this section contains the names of all species of wildlife which have been determined by the Services to be Endangered or Threatened. It also contains the names of species of wildlife treated as Endangered or Threatened because they are sufficiently similar in appearance to Endangered or Threatened species (see § 17.50 *et seq.*).

(b) The columns entitled "Common Name," "Scientific Name," and "Vertebrate Population Where Endangered or Threatened" define the species of wildlife within the meaning of the Act. Thus, differently classified geographic populations of the same vertebrate subspecies or species shall be identified by their differing geographic boundaries, even though the other two columns are identical. The term "Entire" means that all populations throughout the present range of a vertebrate species are listed. Although common names are included, they cannot be relied upon for identification of any specimen, since they may vary greatly in local usage. The Services shall use the most recently accepted scientific name. In cases in which confusion might arise, a synonym(s) will be provided in parentheses. The Services shall rely to the extent practicable on the *International Code of Zoological Nomenclature.*

(c) In the "Status" column the following symbols are used: "E" for Endangered, "T" for Threatened, and "E [or T] (S/A)" for similarity of appearance species.

(d) The other data in the list are nonregulatory in nature and are provided for the information of the reader. In the annual revision and compilation of this title, the following information may be amended without public notice: the spelling of species' names, historical range, footnotes, references to certain other applicable portions of this title, synonyms, and more current names. In any of these revised entries, neither the species, as defined in paragraph (b) of this section, nor its status may be changed without following the procedures of Part 424 of this title.

(e) The "historic range" indicates the known general distribution of the species or subspecies as reported in the current scientific literature. The present distribution may be greatly reduced from this historic range. This column does not imply any limitation on the application of the prohibitions in the Act or implementing rules. Such prohibitions apply to all individuals of the species, wherever found.

(f)(1) A footnote to the **Federal Register** publication(s) listing or reclassifying a species is indicated under the column "When listed." Footnote numbers to §§ 17.11 and 17.12 are in the same numerical sequence, since plants and animals may be listed in the same **Federal Register** document. That document, at least since 1973, includes a statement indicating the basis for the listing, as well as the effective date(s) of said listing.

(2) The "Special rules" and "Critical habitat" columns provide a cross reference to other sections in Parts 17, 222, 226, or 227. The "Special rules" column will also be used to cite the special rules that describe experimental populations and determine if they are essential or nonessential. Separate listing will be made for experimental populations, and the status column will include the following symbols: "XE" for an essential experimental population and "XN" for a nonessential experimental population. The term "NA" (not applicable) appearing in either of these two columns indicates that there are no special rules and/or critical habitat for that particular species. However, all other appropriate rules in Parts 17, 217–227, and 402 still apply to that species. In addition, there may be other rules in this Title that relate to such wildlife, e.g., port-of-entry requirements. It is not intended that the references in the "Special rules" column list all the regulations of the two Services which might apply to the species or to the regulations of other Federal agencies or State or local governments.

(g) The listing of a particular taxon includes all lower taxonomic units. For example, the genus *Hylobates* (gibbons) is listed as Endangered throughout its entire range (China, India, and SE Asia); consequently, all species, subspecies, and populations of that genus are considered listed as Endangered for the purposes of the Act. In 1978 (43 FR 6230–6233) the species *Haliaeetus leucocephalus* (bald eagle) was listed as Threatened in "USA (WA, OR, MN, WI, MI)" rather than its entire population; thus, all individuals of the bald eagle found in those five States are considered listed as Threatened for the purposes of the Act.

(h) The "List of Endangered and Threatened Wildlife" is provided below:

Editorial Note: This is a compilation and special reprint of 50 CFR 17.11 and 17.12 and is current as of the date shown on the cover. Minor changes and corrections to the October 1, 1986, compilation of 50 CFR have been incorporated in this printing, as well as all published final rules that have subsequently appeared in the **Federal Register**. Otherwise no entry in these lists has been significantly affected. This list has been prepared by the staff of the Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240. Readers are requested to advise the Service of any errors in this list. Copies are available from the Publication Unit, US Fish and Wildlife Service, Washington, D.C. 20240.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Eagle, Greenland white-tailed	*Haliaeetus albicilla groenlandicus*	Greenland and adjacent Atlantic islands	do	E	15	NA	NA
Eagle, harpy	*Harpia harpyja*	Mexico south to Argentina	do	E	15	NA	NA
Eagle, Philippine (=monkey-eating)	*Pithecophaga jefferyi*	Philippines	do	E	3	NA	NA
Eagle, Spanish imperial	*Aquila heliaca adalberti*	Spain, Morocco, Algeria	Entire	E	3	NA	NA
Egret, Chinese	*Egretta eulophotes*	China, Korea	do	E	3	NA	NA
Falcon, American peregrine	*Falco peregrinus anatum*	Nests from central Alaska across north-central Canada to central Mexico, winters south to South America.	do	E	2, 3, 145	17.95(b)	NA
Falcon, Arctic peregrine	*Falco peregrinus tundrius*	Nests from northern Alaska to Greenland; winters south to Central and South America.	do	T	2, 3, 145	NA	NA
Falcon, Eurasian peregrine	*Falco peregrinus peregrinus*	Europe, Eurasia south to Africa and Mideast.	do	E	15	NA	NA
Falcon, northern aplomado	*Falco femoralis septentrionalis*	U.S.A. (AZ, NM, TX), Mexico, Guatemala.	do	E	216	NA	NA
Falcon, peregrine	*Falco peregrinus*	Worldwide, except Antarctica and most Pacific Islands.	Wherever found in wild in the conterminous 48 States.	E(S/A)	145	NA	NA
Finch, Laysan (honeycreeper)	*Telespyza (=Psittirostra) cantans*	U.S.A. (HI)	Entire	E	1	NA	NA
Finch, Nihoa (honeycreeper)	*Telespyza (=Psittirostra) ultima*	do	do	E	1	NA	NA
Flycatcher, Euler's	*Empidonax euleri johnstonei*	West Indies: Grenada	do	E	3	NA	NA
Flycatcher, Seychelles paradise	*Terpsiphone corvina*	Indian Ocean: Seychelles	do	E	3	NA	NA
Flycatcher, Tahiti	*Pomarea nigra*	South Pacific Ocean: Tahiti	do	E	3	NA	NA
Fody, Seychelles (weaver-finch)	*Foudia sechellarum*	Indian Ocean: Seychelles	do	E	3	NA	NA
Frigatebird, Andrew's	*Fregata andrewsi*	East Indian Ocean	do	E	15	NA	NA
Goose, Aleutian Canada	*Branta canadensis leucopareia*	U.S.A. (AK, CA, OR, WA), Japan	do	E	1, 3	NA	NA
Goose, Hawaiian (=nene)	*Nesochen (=Branta) sandvicensis*	U.S.A. (HI)	do	E	1	NA	NA
Goshawk, Christmas Island	*Accipiter fasciatus natalis*	Indian Ocean: Christmas Island	do	E	3	NA	NA
Grackle, slender-billed	*Quisicalus (=Cassidix) palustris*	Mexico	do	E	3	NA	NA
Grasswren, Eyrean (flycatcher)	*Amytornis goyderi*	Australia	do	E	3	NA	NA
Grebe, Atitlan	*Podilymbus gigas*	Guatemala	do	E	3	NA	NA
Greenshank, Nordmann's	*Tringa guttifer*	U.S.S.R., Japan, south to Malaya, Borneo.	do	E	15	NA	NA
Guan, horned	*Oreophasis derbianus*	Guatemala, Mexico	do	E	3	NA	NA
Gull, Audouin's	*Larus audouinii*	Mediterranean Sea	do	E	3	NA	NA
Gull, relict	*Larus relictus*	India, China	do	E	15	NA	NA
Hawk, Anjouan Island sparrow	*Accipiter francesii pusillus*	Indian Ocean: Comoro Islands	do	E	3	NA	NA
Hawk, Galapagos	*Buteo galapagoensis*	Ecuador (Galapagos Islands)	do	E	3	NA	NA
Hawk, Hawaiian (=Io)	*Buteo solitarius*	U.S.A. (HI)	do	E	1	NA?	NA
Hermit, hook-billed (hummingbird)	*Glaucis (=Ramphodon) dohrnii*	Brazil	do	E	15	NA	NA
Honeycreeper, crested (='akohekohe)	*Palmeria dolei*	U.S.A. (HI)	do	E	1	NA	NA
Hornbill, helmeted	*Rhinoplax vigil*	Thailand, Malaysia	do	E	15	NA	NA
Honeyeater, helmeted	*Meliphaga cassidix*	Australia	do	E	4	NA	NA
Ibis, Japanese crested	*Nipponia nippon*	China, Japan, U.S.S.R., Korea	do	E	3	NA	NA
Kagu	*Rhynochetos jubatus*	South Pacific Ocean: New Caledonia	do	E	3	NA	NA
Kakapo (=owl-parrot)	*Strigops habroptilus*	New Zealand	do	E	3	NA	NA
Kestrel, Mauritius	*Falco punctatus*	Indian Ocean: Mauritius	do	E	3	NA	NA
Kestrel, Seychelles	*Falco araea*	Indian Ocean: Seychelles Islands	do	E	3	NA	NA
Kingfisher, Guam Micronesian	*Halcyon cinnamomina cinnamomina*	Western Pacific Ocean: U.S.A. (Guam)	do	E	156	NA	NA
Kite, Cuba hook-billed	*Chondrohierax uncinatus wilsonii*	West Indies: Cuba	do	E	3	NA	NA
Kite, Everglade snail	*Rostrhamus sociabilis plumbeus*	U.S.A. (FL), Cuba	Florida	E	1	17.95(b)	NA
Kite, Grenada hook-billed	*Chondrohierax uncinatus mirus*	West Indies: Grenada	Entire	E	3	NA	NA

REFERENCE NO. 30

Endangered and Threatened Wildlife in New Jersey

Endangered species are those whose prospects for survival in the state are in immediate danger because of a loss or change of habitat, over-exploitation, predation, competition or disease. Immediate assistance is needed to prevent extinction.

Threatened species are those who may become endangered if conditions surrounding the species begin or continue to deteriorate.

FISH

Endangered	Threatened
Shortnose Sturgeon*	Atlantic Sturgeon
	American Shad
	Brook Trout
	Atlantic Tomcod

AMPHIBIANS

Endangered	Threatened
Tremblay's Salamander	Long-tailed Salamander
Blue-spotted Salamander	Eastern Mud Salamander
Eastern Tiger Salamander	
Pine Barrens Treefrog	
Southern Gray Treefrog	

REPTILES

Endangered	Threatened
Corn Snake	Wood Turtle
Bog Turtle	Northern Pine Snake
Timber Rattlesnake	Atlantic Green Turtle
Atlantic Hawksbill Turtle*	
Atlantic Loggerhead Turtle*	
Atlantic Ridley Turtle*	
Atlantic Leatherback Turtle*	

Continued

Endangered and Nongame Species Program

List Established: December 19, 1974
List Revised: March 29, 1979 ★ January 17, 1984 ★ May 6, 1985
July 20, 1987

New Jersey Department of Environmental Protection • Division of Fish, Game & Wildlife

BIRDS

Endangered

Pied-billed Grebe†
Cooper's Hawk
Northern Harrier†
Bald Eagle*
Peregrine Falcon*
Piping Plover
Upland Sandpiper
Least Tern
Roseate Tern
Black Skimmer
Short-eared Owl†
Cliff Swallow†
Sedge Wren
Henslow's Sparrow
Vesper Sparrow†
Loggerhead Shrike

Threatened

Osprey
Red-shouldered Hawk
Northern Goshawk
Great Blue Heron
Yellow-crowned Night Heron
Barred Owl
Red-headed Woodpecker
Bobolink
Savannah Sparrow
Ipswich Sparrow
Grasshopper Sparrow
American Bittern†
Black Rail

MAMMALS

Endangered

Sperm Whale*
Blue Whale*
Finback Whale*
Sei Whale*
Humpback Whale*
Right Whale*

*(*Indicates Federal and State endangered status.)*
(†only Breeding population endangered)

PERSPECTIVE

Species are listed as endangered when record of past and present population indicate that the species is on the decline. Habitat—that place that animals need to live—is ever changing and when habitats change, some species survive and others decline. In New Jersey habitat change is partially responsible for the decline of 54 endangered and threatened species. The Endangered and Nongame Species Program is responsible for protecting these species found in the state.

WE NEED YOUR HELP

Reports of sightings of endangered and threatened species are welcome! When you observe any species listed, jot down the date, time, exact location and any behavioral observations and send to CN 400, Trenton, NJ 08625. Your contributions to the Endangered and Nongame Wildlife Conservation Fund on your NJ Income Tax form continue to make endangered species protection possible.

HABITAT & REPRODUCTION = SURVIVAL

DEFINITION OF ACRONYMS

FEDERAL STATUS

LE=listed endangered.
LT=listed threatened.
PE=proposed endangered.
PT=proposed threatened.
C2=candidate for listing.

STATE STATUS

LE=listed as endangered. (short-eared owl wintar pop. listed as stable:S)
LT=listed as threatened.

COUNTY OCCURRENCE

Y=present year-round, breeds.
N=present year-round, not recorded breeding.
B=present during the summer, breeds.
W=present during the winter.
T=present as a transient.
?=present status undetermined.
*=indicates that the county is within the species known breeding range.

5\18\87

NEW JERSEY NATURAL HERITAGE PROGRAM
POTENTIAL THREATENED AND ENDANGERED SPECIES
IN MIDDLESEX COUNTY

AMERICAN BITTERN	FEDERAL STATUS:	COUNTY
BOTAURUS LENTIGINOSUS	STATE STATUS: LT	OCCURRENCE: Y

HABITAT COMMENTS
Fresh water bogs, swamps, wet fields, cattail and bulrush marshes, brackish and saltwater marshes and meadows.

BARRED OWL	FEDERAL STATUS:	COUNTY
STRIX VARIA	STATE STATUS: LT	OCCURRENCE: ?

HABITAT COMMENTS
Dense woodland and forest (conif. or hardwood), swamps, wooded river valleys, cabbage palm-live oak hammocks, especially where bordering streams, marshes, and meadows.

BOBOLINK	FEDERAL STATUS:	COUNTY
DOLICHONYX ORYZIVORUS	STATE STATUS: LT	OCCURRENCE: ?

HABITAT COMMENTS
Tall grass areas, flooded meadows, prairie, deep cultivated grains, alfalfa and clover fields. In migration and winter also in rice fields, marshes, and open woody areas.

BOG TURTLE	FEDERAL STATUS: C2	COUNTY
CLEMMYS MUHLENBERGII	STATE STATUS: LE	OCCURRENCE: ?

HABITAT COMMENTS
Slow, shallow rivulets of sphagnum bogs, swamps, and marshy meadows; sea level to 1200 m in Appalachians. Commonly basks on tussocks in morning in spring and early summer. Hibernates in subterreanean rivulet or seepage area.

COOPER'S HAWK	FEDERAL STATUS:	COUNTY
ACCIPITER COOPERII	STATE STATUS: LE	OCCURRENCE: W*

HABITAT COMMENTS
Primarily mature forest, either broadleaf or coniferous, mostly the former; also open woodland and forest edge.

GREAT BLUE HERON	FEDERAL STATUS:	COUNTY
ARDEA HERODIAS	STATE STATUS: LT	OCCURRENCE: N*

HABITAT COMMENTS
Freshwater and brackish marshes, along lakes, rivers, bays, lagoons, ocean beaches, mangroves, fields, and meadows.

HENSLOW'S SPARROW — FEDERAL STATUS: — COUNTY
AMMODRAMUS HENSLOWII — STATE STATUS: LE — OCCURRENCE: ?

HABITAT COMMENTS
Open fields and meadows with grass interspersed with weeds or shrubby vegetation, especially in damp or low-lying areas. In migration and winter also in grassy areas adjacent to pine woods or second-growth woodland.

LONGTAIL SALAMANDER — FEDERAL STATUS: — COUNTY
EURYCEA LONGICAUDA — STATE STATUS: LT — OCCURRENCE: ?

HABITAT COMMENTS
Streamsides, spring runs, cave mouths, forested floodplains in South. May disperse into wooded terrestrial habitats in wet weather. Hides under rocks, logs, and other debris.

NORTHERN HARRIER — FEDERAL STATUS: — COUNTY
CIRCUS CYANEUS — STATE STATUS: LE — OCCURRENCE: Y

HABITAT COMMENTS
Marshes, meadows, grasslands, and cultivated fields. Perches on ground or on stumps or posts.

PEREGRINE FALCON — FEDERAL STATUS: LE — COUNTY
FALCO PEREGRINUS — STATE STATUS: LE — OCCURRENCE: Y

HABITAT COMMENTS
"A variety of open situations from tundra, moorlands, steppe and seacoasts, especially where there are suitable nesting cliffs, to high mountains, more open forested regions, and even human population centers...".

PIED-BILLED GREBE — FEDERAL STATUS: — COUNTY
PODILYMBUS PODICEPS — STATE STATUS: LE — OCCURRENCE: ?

HABITAT COMMENTS
Lakes, ponds, sluggish streams, and marshes; in migration and in winter also in brackish bays and estuaries.

PINE BARRENS TREEFROG — FEDERAL STATUS: C2 — COUNTY
HYLA ANDERSONII — STATE STATUS: LE — OCCURRENCE: ?

HABITAT COMMENTS
Streams, ponds, cranberry bogs, and other wetland habitats. Post-breeding habitat the surrounding woodlands.

SAVANNAH SPARROW	FEDERAL STATUS:	COUNTY
PASSERCULUS SANDWICHENSIS	STATE STATUS: LT	OCCURRENCE: W*

HABITAT COMMENTS
"Open areas, especially grasslands, tundra, meadows, bogs, farmlands, grassy areas with scattered bushes, and marshes, including salt marshes in the BELDINGI and ROSTRATUS groups (Subtropical and Temperate zones)".

SHORT-EARED OWL	FEDERAL STATUS:	COUNTY
ASIO FLAMMEUS	STATE STATUS: LE/S	OCCURRENCE: W*

HABITAT COMMENTS
Open country, including prairie, meadows, tundra, moorlands, marshes, savanna, dunes, fields, and open woodland. Roosts by day on ground or on low open perches.

UPLAND SANDPIPER	FEDERAL STATUS:	COUNTY
BARTRAMIA LONGICAUDA	STATE STATUS: LE	OCCURRENCE: B

HABITAT COMMENTS
Grasslands, especially prairies, dry meadows, pastures, and (in Alaska) scattered woodlands at timberline; very rarely in migration along shores and mudflats.

WOOD TURTLE	FEDERAL STATUS:	COUNTY
CLEMMYS INSCULPTA	STATE STATUS: LT	OCCURRENCE: Y

HABITAT COMMENTS
Vicinity of streams and rivers. In streams and in wooded areas and fields adjacent to streams in summer. In streams in spring and fall. Hibernates in banks or bottoms of streams in winter.

REFERENCE NO. 31

SURFACE WATER QUALITY STANDARDS

N.J.A.C. 7:9-4.1 et seq.

May 1985

New Jersey Department of Environmental Protection/Division of Water Resources

INDEX E - Surface Water Classifications of the Raritan River and Raritan Bay Basin

ALLERTON CREEK (Allerton) - Entire length	FW2-NT
AMBROSE BROOK (Piscataway) - Entire length	FW2-NT
AMWELL LAKE (Snydertown)	FW2-NT(C1)
ASSISCONG CREEK (Flemington) - Entire length	FW2-NT
BACK BROOK (Vanliew's Corners) - Entire length	FW2-NT
BALDWINS CREEK	
(Pennington) - Entire length, except segment described separately below	FW2-NT
(Baldwin) - Segment within the boundaries of Baldwin Lake Wildlife Management Area	FW2-NT(C1)
BARCLAY BROOK (Redshaw Corners) - Entire length	FW2-NT
BEAVER BROOK	
(Cokesbury) - Source to Reformatory Road bridge	FW2-TP(C1)
(Annandale) - Reformatory Rd. bridge to Raritan River, South Branch	FW2-TM
BEDEN BROOK (Montgomery) - Entire length	FW2-NT
BIG BEAR BROOK (West Windsor) - Entire length	FW2-NT
BIG BROOK (Vanderberg) - Entire length	FW2-NT
BLACK BROOK (Polktown) - Entire length	FW2-TP(C1)
BLACK RIVER - See LAMINGTON RIVER	
BLACKBERRY CREEK	
(Oceanport) - Source to a line beginning on the easternmost extent of Gooseneck Point and bearing approximately 162 degrees True North to its terminus on the westernmost extent of an unnamed point of land in the vicinity of the western extent of Cayuga Ave. in Oceanport	SE1
(Oceanport) - Creek below the line described above	SE1
BLUE BROOK (Mountainside) - Entire length	FW2-NT
BOULDER HILL BROOK (Tewksbury) - Entire length	FW2-TP(C1)
BOUND BROOK (Dunellen) - Entire length	FW2-NT
BRANCHPORT CREEK	
(Long Branch) - Source to a line beginning on the northernmost extent of an unnamed point of land lying north of Pocano Ave. in Oceanport and bearing approximately 055 degrees True North to its terminus on the westernmost extent of the northern bulkhead at the lagoon located between France Rd. and Lori Rd. in Monmouth Beach	FW2-NT/SE1
(Monmouth Beach) - Creek below line described above	SE1(C1)
BUDD LAKE (Mt. Olive)	FW2-NT(C1)
BURNETT BROOK (Ralston) - Entire length	FW2-TP(C1)
CAPOOLONG CREEK (Sydney) - Entire length	FW2-TP(C1)
CEDAR BROOK (Spotswood) - Entire length	FW2-NT
CHAMBERS BROOK (Whitehouse) - Entire length	FW2-NT
CHEESEQUAKE STATE PARK WATERS (S. Amboy) - Fresh waters within the park upstream of the limits of tidal influence	FW2-NT(C1)

(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Primary and secondary contact recreation;

3. Industrial and agricultural water supply;

4. Public potable water supply after such treatment as required by law or regulation; and

5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

2. Maintenance, migration and propagation of the natural and established biota;

3. Primary and secondary contact recreation; and

4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Migration of diadromous fish;

3. Maintenance of wildlife;

4. Secondary contact recreation; and

5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;

2. Maintenance and migration of fish populations;

3. Migration of diadromous fish;

4. Maintenance of wildlife; and

5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

once-through basis for the duration of the test, in accordance with N.J.A.C. 7:18.

"Fresh water(s)" means all nontidal and tidal waters generally having a salinity, due to natural sources, of less than or equal to 3.5 parts per thousand at mean high tide.

"FW" means the general surface water classification applied to fresh waters.

"FW1" means those fresh waters that originate in and are wholly within Federal or State parks, forests, fish and wildlife lands, and other special holdings, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges, as designated in Index A incorporated into this subchapter.

"FW2" means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

"Heat dissipation area" means a mixing zone, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances, hazardous conditions, or violating the provisions of this subchapter.

"Hypolimnion" means the lower region of a stratified waterbody that extends from the thermocline to the bottom of the waterbody, and is isolated from circulation with the upper waters, thereby receiving little or no oxygen from the atmosphere.

"Important species" means species that are commercially valuable (e.g., within the top ten species landed, by dollar value); recreationally valuable; threatened or endangered; critical to the organization and/or maintenance of the ecosystem; or other species necessary in the food web for the well-being of the species identified in this definition.

"Industrial water supply" means water used for processing or cooling.

"Intermittent stream" means a stream with a MA7CD10 flow of less than one-tenth (0.1) cubic foot per second.

"Lake, pond, or reservoir" means any impoundment, whether naturally occurring or created in whole or in part by the building of structures for the retention of surface water, excluding sedimentation control and stormwater retention/detention basins.

"LC50" means the median lethal concentration of a toxic substance, expressed as a statistical estimate of the concentration that kills 50 percent of the test organisms under

characteristics, but are suitable for a wide variety of other fish species.

"NPDES" means National Pollutant Discharge Elimination System.

"NT" means nontrout waters.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms.

"Outstanding National Resource Waters" means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance) as designated in Index G incorporated into this subchapter.

"Persistent" means relatively resistant to degradation, generally having a half life of over 96 hours.

"Pinelands waters" means all waters within the boundaries of the Pineland Area, except those waters designated as FW1 in this subchapter, as established in the Pinelands Protection Act N.J.S.A. 13:18A-1 et seq. and shown on Plate 1 of the "Comprehensive Management Plan" adopted by the New Jersey Pinelands Commission in November 1980.

"PL" means the general surface water classification applied to Pinelands Waters.

"Primary contact recreation" means recreational activities that involve significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing, and water skiing.

"Public hearing" means a legislative type hearing before a representative or representatives of the Department providing the opportunity for public comment, but does not include cross-examination.

"River mile" means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. Mile zero for the Delaware River is located at the intersection of the centerline of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

"Saline waters" means waters having salinities generally greater than 3.5 parts per thousand at mean high tide.

"SC" means the general surface water classification applied to coastal saline waters.

"SE" means the general surface water classification applied to saline waters of estuaries.

REFERENCE NO. 32

Form DWM-002 B
2/84

NEW. JEY DEPARTMENT OF ENVIRONMENTAL PRO. .TION
DIVISION OF WASTE MANAGEMENT
~~120 ROUTE 156, YARDVILLE, N.J. 08620~~

NOTICE OF VIOLATION

ID NO. NJD002150933 DATE 3/27/86

NAME OF FACILITY L.A. Dreyfus Co.

LOCATION OF FACILITY 3775 Park Ave., Edison, N.J.

NAME OF OPERATOR Phil Thomas

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION 7:26-7.4(b)1 - Generator missing return copy for Manifest NJ0139932.
7:26-9.4(g)6 i, ii, iii, iv written documentation missing for following: NAME & Job title for each position, written job description, written description of type & amount of introductory & continuing training, and no training records.
7:26-9.6(f)4 Arrangement to familiarize local hospitals w/ the properties of hazardous waste handled missing

Remedial action to correct these violations must be initiated immediately and be completed by April 27, 1986. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Investigator, ~~Division~~ of Waste Management
Department of Environmental Protection

FACILITY NAME: L.A. Dreyfus Co.

ADDRESS: 3775 Park Ave.
Edison, N.J.

TIME IN: 10:00

TIME OUT: 12:40

COUNTY: Middlesex

EPA ID : NJD002150993

DATE OF INSPECTION: 3/27/86

PHOTOS TAKEN ☐ YES ☑ NO

If yes, how many? _____

SAMPLE TAKEN ☐ YES ☑ NO NO. OF SAMPLES _____

NJDEP ID # _____

MANIFESTS REVIEWED ☑ YES ☐ NO

Number of manifests in compliance 22

Number of manifests not in compliance 1

List manifest document numbers of those manifests not in compliance.

Manifest # NJ0137732 Missing return copy

L.A. DREYFUS COMPANY
3775 PARK AVENUE · EDISON, NEW JERSEY

PHILIP J. THOMAS
ENVIRONMENTAL CONTROL CHEMIST

TEL: (201) 549-1600
TLX: 475-4051
CABLE LADCOMP-EDISON (NJ)

MAIL ADDRESS
P.O. BOX 500
SOUTH PLAINFIELD, N.J. 07080 U.S.A.

HAZARDOUS WASTE COMPLIANCE MONITORING AND ENFORCEMENT LOG

1. EPA ID: NJDlolalal1151d1315 | Entry Type : New [V] Update [ ]
2. HANDLER NAME: L.A. Dreyfus Co. | Initials of Evaluator WS
3. ADDRESS: 3775 Park Ave., Edison NJ | NYSDEC/NJDEP Region: 2

4. DATE OF INITIAL EVALUATION WHICH IS THE BASIS FOR THIS REPORT: 3/27/86

4a. AGENCY RESPONSIBLE FOR EVALUATION: Put code in box [E] Choose one
E = EPA; S = State; J = Joint; C = Contractor/EPA; O = Other; B = Contractor/State; X = Oversight

6. KIND OF EVALUATION COVERED BY THIS REPORT: Enter code in box [I] Choose one
1 = Evaluation Inspection; 2 = Case Developement; 3 = Record Review; 4 = Ground Water Monitoring Evaluation; 5 = Follow Up; 6 = Other - Citizen Complaint; 7 = Other - Part B Call-In; 8 = Other - Withdrawal Candidate; 9 = Other - Closed Facility; 0 = Other - General

6a TYPE OF EVALUATION: \ (Enter code in box. See Reverse side for choice of codes.)

7. DATE OF EVALUATION COVERED BY THIS REPORT (enter only if different from 5): __/__/__

8. AREA OF EVALUATION AND CLASS OF VIOLATION (Enter 'X' in appropiate boxaifrviolations found.Enter '0' if no violafound in Aera evaluated.Enter 'Z' to indicate area of interest.)

Class of Violation	Area of Evaluation						
	GWM	CL/PC	Fin. Res	Pt. B	Cmpl. Sch	Manifest	Other
I						0	0
II						0	X

9. ENFORCEMENT ACTIONS:

Class	Area of Violation	Type (use code)	Date Action Taken	Compliance Dates Scheduled	Compliance Dates Actual	Penalty Assessed	Penalty Collected	Resp. Ag. (use code)

Codes for Types of Enforcement Actions: (See instruction for additional codes)
03 = Warning Letter; 04 = Compliance Complaint; 05 = Administrative Order; 10 = Informal Action; 11 = Filed Civil Action; 12 = Filed Criminal Action; 15 = §3008(h) Final Order

Codes for Responsible Agency: E = EPA; S = State; X = EPA oversight

9a. Status of handler with compliance schedule of orders: Meeting compliance schedule Yes__ No__ Status Date __/__/__

10. Compliance Schedule Milestones (See reverse side.)

DEPARTMENT OF JUSTICE (IF APPLICABLE): / /

REFERENCE NO. 33

Form DWM-029
3/84

NEW JER' 'DEPARTMENT OF ENVIRONMENTAL P TECTION
DIVISION OF WASTE MANAGEMENT

INSPECTION REPORT

REPORT PREPARED FOR:

- ☑ Generator
- ☐ Transporter
- ☐ HWM (TSD) Facility

FACILITY INFORMATION

Name: L.A. Dreyfus Co.

Address: 3775 Park Ave.
Edison, N.J.

Lot: _____ Block: _____

County: Middlesex

Phone: (201) 549-1600

EPA ID#: NJD002150993

Date of Inspection: 3/28/86

PARTICIPATING PERSONNEL

State or EPA Personnel: Wolf Skacel
Ken Claytman

Facility Personnel: Phil Thomas

Report Prepared by Name: W. Skacel

Region: CFO

Telephone#: (609) 426-0700

Reviewed by: Linda Z. Jadan

Date of Review: 4-7-86

Form DWM-005
2/83

NEW JE ,EY DEPARTMENT OF ENVIRONMENTAL . .TECTION
DIVISION OF WASTE MANAGEMENT
BUREAU OF FIELD OPERATIONS

ENFORCEMENT REFERRAL

TO: Karen Ward thru Vinie Krisak DATE: 4-7-86

FROM: Linda Z. Jadan REGION: Central

RE: L.A. Dreyfus Co. NJD002150993 3775 Park Ave.
Name of Facility *ID Number* *Location Address*

Edison Middlesex
Lot and Block *Township* *County*

Mailing Address *Responsible Party*

The attached inspection/investigation report(s) dated 3/27/86 is being referred and it is recommended a NOV + SO be issued for violations of:

NJAC 7:26– 7.4(h)1 - Generator missing Part B of manifest
9.4(g)6i - Personnel Training - no job title
9.4(g)6ii - " " - no written job descriptio
9.4(g)6iii - " " type + amt of training
9.4(g)6iv - " " - no training records
9.6(f)4 - No arrangements to familiarize hospital w/ hazardous waste handled

~~NJSA 58:10–~~ 9.4(a)5 - No documented daily drum inspection

Suggested penalty: - minimum per schedule -

ADDITIONAL COMMENTS:

REVIEWED AND APPROVED BY:

Linda Z. Jadan 04/09/86

White – Enforcement and Compliance Copy
Yellow – Region Copy

REFERENCE NO. 34

File 12-05-07

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500 SOUTH PLAINFIELD, N. J.
07080 U. S. A.
TELEPHONE: AREA CODE 201 549-1600
NJD002150993

PLANT 3775 PARK AVE., EDISON, N. J. 08820
CABLE "LADCOMP-EDISON (NJER)"
TLX. 475-4051

April 7, 1986

Mr. Wolf Skacel
N.J.D.E.P.
Division of Waste Management
Central Field Office
Twin Rivers Professional Building
East Windsor, NJ 08520

Dear Mr. Skacel:

This letter is to inform you of the L. A. Dreyfus Company's corrective measures it has undertaken to attain compliance from the violation notice you gave us on March 27, 1986. Enclosed you will find a copy of NJ Manifest 0139932, which was procured from Keystone Cement. The L. A. Dreyfus Company will have on file, the necessary documentation of training and job descriptions. We will also, send to the two local hospitals the Material Data Safety Sheets for our hazardous waste.

Sincerely yours,

Philip J. Thomas

Philip J. Thomas
Environmental Control Chemist

Enclosure
PJT:las

Contacted Mr. Thomas' office on 4/14/86 @ 9:42 - he was on vacation. I spoke with Robt. T. Stocker and asked him to leave a message. message was to send documentation of training & job description, also need copy of letter sent to hospitals

Wolf

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500 SOUTH PLAINFIELD, N. J.
07080 U. S. A.
TELEPHONE: AREA CODE 201 549-1600

PLANT: 3775 PARK AVE., EDISON, N. J. 08820
CABLE: "LADCOMP-EDISON (NJER)"
TLX: 475-4051

April 22, 1986

Muhlenberg Hospital
Park Avenue & Randolph Road
Plainfield, NJ 07060

Gentlemen:

The L. A. Dreyfus Company is enclosing copies of Material Data Safety Sheets for our Hazardous Wastes. Please keep these sheets on file in the event that a employee is sent to your faciltiy from a hazardous waste accident. Our thanks for your cooperation in this matter, and if there are any questions regarding the safety sheets, please contact me.

Sincerely,

Philip J. Thomas
Environmental Control Chemist

Enclosures
PJT:las
Copies to Mr. V. C. Bonica
Mr. R. A. Devansky
Mr. C. A. Czaplicki
Mr. L. B. Svard
Mr. S. Eldridge

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500 SOUTH PLAINFIELD, N. J.
07080 U. S. A.
TELEPHONE: AREA CODE 201 549-1600

PLANT: 3775 PARK AVE., EDISON, N. J. 08820
CABLE: "LADCOMP-EDISON (NJER)"
TLX: 475-4051

April 22, 1986

John F. Kennedy Medical Center
James Street
Edison, NJ 08820

Gentlemen:

The L. A. Dreyfus Company is enclosing copies of Material Data Safety Sheets for our Hazardous Wastes. Please keep these sheets on file in the event that a employee is sent to your faciltiy from a hazardous waste accident. Our thanks for your cooperation in this matter, and if there are any questions regarding the safety sheets, please contact me.

Sincerely,

Philip J. Thomas
Environmental Control Chemist

Enclosures
PJT:las
Copies to Mr. V. C. Bonica
Mr. R. A. Devansky
Mr. C. A. Czaplicki
Mr. L. B. Svard
Mr. S. Eldridge

12-05-07

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500 SOUTH PLAINFIELD, N. J.
07080 U. S. A.
TELEPHONE: AREA CODE 201 549-1600

NJD 002150993

PLANT: 3775 PARK AVE., EDISON, N. J. 0882(
CABLE: "LADCOMP-EDISON (NJER)"
TLX 475-4051

April 24, 1986

Mr. Wolf Skacel
N.J.D.E.P.
Division of Waste Management
Central Field Office
Twin Rivers Professional Building
East Windsor, NJ 08520

Dear Mr. Skacel:

Enclosed you will find copies of the letters forwarded to the hospitals, documentation of training and job descriptions that you requested in your telephone conversation of April 14, 1986.

We trust this information will be satisfactory, and if we can be of any further help, please call.

Sincerely,

L. A. DREYFUS COMPANY

Philip J. Thomas
Environmental Control Chemist

PJT:las
Enclosures

L. A. DREYFUS COMPANY WASTE TRAINING PROCEDURES

Handlers will have a basic knowledge of hazardous waste and emergency procedures as instructed by Phil Thomas. Who receives his training annually by Lion Technology and a certificate is issued. Training procedures include the following:

(1) Safety precautions for handling hazardous waste.

(2) First Aid for hazardous waste exposure.

(3) A checklist for preventing hazardous waste accidents:

(a) Wearing proper protective clothing

(b) Respirators, face shields, goggles

(c) Check for leaking drums

(d) Spill clean up procdure, absorbent materials, recovery drums

(e) Proper equipment when moving drums

(f) Insure proper labeling requirements

(g) Location of Emergency Response Guidebook

(h) Knowledge of Material Safety Data Sheets

Philip J. Thomas

Title: Environmental Control Chemist

Job Description:

1. Perfoms the chemical analyses and special test of the plant's water supply and waste water.
2. Performs chemical analyses for the operation of the Boiler House.
3. Evaluates and reviews results of water and effluent analyses conducted by others.
4. Submits reports on waste water, water and hazardous waste to the proper agencies.
5. In charge of the Hazardous Waste Program and training of handlers.
6. Maintains permits for water, waste water, hazardous waste and air pollution.
7. Oversees solid waste disposal.

Ralph Dispagno

Title: Executive Supervisor

Job Description:

1. Head of the grounds Maintenance crew.
2. Maintains the Sewerage Treatment Plant.
3. In charge of Plant Sanitation.
4. Oversees our solid waste disposal.
5. Certified Pesticide Applicator.
6. Handles transportation of all hazardous waste within the facility.

Angelo Mangione

Title: Assistant Supervisor

Job Description:

1. Assistant head of the grounds Maintenance crew.
2. Maintains the Sewerage Treatment Plant.
3. Takes care of Plant Sanitation.
4. Oversees our solid waste disposal.
5. Registered Pesticide Operator.
6. Handles transporation of all hazardous waste within the facility.

Martinus Meulman

Title: Laborer

Job Description:

1. Ground Maintenance Crew.
2. Helps maintain Sewerage Treatment Plant.
3. Takes care of Plant Sanitation.
4. Oversees solid waste disposal.
5. Registered Pesticide Operator.
6. Handles transporation of all hazardous waste within the facility.

Jeff Adams

Title: Laborer

Job description:

1. Ground Maintenance Crew
2. Handles transportation of all hazardous waste within the facility.

REFERENCE NO. 35

HW 0117

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

John J. Trela, Ph.D.,
Acting Director

CN 407
TRENTON, NEW JERSEY 08625

RICHARD C. SALKIE, P.E.
ASSOCIATE DIRECTOR

SEP 10 1986

IN THE MATTER OF L.A. DREYFUS COMPANY 3775 PARK AVENUE EDISON, NEW JERSEY	:	NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

This Notice of Civil Administrative Penalty Assessment is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP" or the "Department") by N.J.S.A. 13:1D-1 et seq. and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and duly delegated to the Assistant Director for Enforcement of the Division of Hazardous Waste Management pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1) L.A. Dreyfus Company (hereinafter "L.A."), located at 3775 Park Avenue, Block #556J, Lot #13A, Township of Edison, County of Middlesex, State of New Jersey is a registered generator of hazardous waste (EPA ID #NJD002150993).

2) During the course of a routine Departmental inspection conducted on March 27, 1986, it was noted that L.A. violated the New Jersey Administrative Code; specifically:

   a) L.A. failed to notify the Department when they did not receive a copy of manifest #NJ0139932 within thirty-five (35) days from the date the hazardous waste described in such manifest was shipped off site, in violation of N.J.A.C. 7:26-7.4(h)1.

   b) L.A. had no records containing job titles for each position related to hazardous waste management and the person filling each position, in violation of N.J.A.C. 7:26-9.4(g)6i.

   c) L.A. had no written job description for each title listed under N.J.A.C. 7:26-9.4(g)6i in violation of N.J.A.C. 7:26-9.4(g)6ii.

   d) L.A. had no written description of the type and amount of both introductory and continuing training given to each person holding a position related to the management of hazardous waste, in violation of N.J.A.C. 7:26-9.4(g)6iii.

e) L.A. did not keep written records documenting the training or job experiences completed by employees holding positions related to hazardous waste management, in violation of N.J.A.C. 7:26-9.4(g)6iv.

f) L.A. made no arrangements to familiarize local hospitals with the properties of the hazardous waste handled at the facility and the types of injuries which could result from fires, explosions or discharges at the facility, in violation of N.J.A.C. 7:26-9.6(f)4.

g) L.A. failed to conduct daily drum inspections, in violation of N.J.A.C. 7:26-9.4(d)5.

3) Based on the facts set forth in these FINDINGS, the Department has determined that L.A. has violated the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated pursuant thereto, N.J.A.C. 7:26-1 et seq., specifically N.J.A.C. 7:26-7.4(h)1, 9.4(g)6i, 9.4(g)6ii, 9.4(g)6iii, 9.4(g)6iv, 9.6(f)4, 9.4(d)5.

NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

4) Pursuant to N.J.S.A. 13:1E-9e and based upon the above FINDINGS, the Department has determined that a civil administrative penalty should be assessed against L.A. in the amount of $1,750.

5) Payment of the penalty is due when a final order is issued by the Commissioner subsequent to a hearing, if any, or when this Notice of Civil Administrative Penalty Assessment becomes a final order (see following paragraph). Payment shall be made by certified check payable to "Treasurer, State of New Jersey" and shall be submitted to:

Assistant Director for Enforcement
Division of Hazardous Waste Management
CN 407
Trenton, NJ 08625

6) If no request for a hearing is received within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment, it shall become a final order upon the twenty-first calendar day following its receipt and the penalty shall be due and payable.

NOTICE OF RIGHT TO A HEARING

7) Pursuant to N.J.S.A 52:14B-1 et seq. and N.J.S.A. 13:1E-9, L.A. is entitled to an administrative hearing. Any hearing request shall be delivered to the address referenced in paragraph 5 within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment.

8) Pursuant to N.J.S.A. 52:14B-9(b) and N.J.A.C. 1:1-6.1(b), L.A.

shall, in its request for a hearing, furnish NJDEP with the following:

a. A statement of the legal authority and jurisdiction under which the hearing or action to be taken is to be held;

b. A reference to the particular sections of the statutes and rules involved;

c. A short and plain statement of the matters of fact and law asserted; and

d. The provisions of this Notice of Civil Administrative Penalty Assessment to which L.A. objects, the reasons for such objections, and any alternative provisions proposed.

GENERAL PROVISIONS

9) This Notice of Civil Administrative Penalty Assessment is binding on L.A., its principals, directors, officers, agents, successors, assigns, any trustee in bankruptcy or other trustee, and any receiver appointed pursuant to a proceeding in law or equity.

10) Notice is given that violations of any statutes, rules or permits other than those herein cited may be cause for additional enforcement actions, either administrative or judicial. By issuing this Notice of Civil Administrative Penalty Assessment the Department does not waive its rights to initiate additional enforcement actions.

11) No obligations imposed by this Notice of Civil Administrative Penalty Assessment (with the exception of paragraph 4, above) are intended to constitute a debt, damage claim, penalty or other civil action which should be limited or discharged in a bankruptcy proceeding. All obligations are imposed pursuant to the police powers of the State of New Jersey, intended to protect the public health, safety, welfare and environment.

12) Notice is given that pursuant to N.J.S.A. 13:1E-9e, the Department is authorized to assess a civil administrative penalty of not more than $25,000.00 for each violation and additional penalties of not more than $2,500.00 for each day during which the violation continues after receipt of an administrative order from the Department.

13) Notice is further given that pursuant to N.J.S.A. 13:1E-9f, any person who violates N.J.S.A. 13:1E-1 et seq. or any code, rule or regulation promulgated thereunder shall be liable to a penalty of not more than $25,000.00 per day of such violation, and each day's continuance of the violation shall constitute a separate violation.

14) Notice is further given that pursuant to N.J.S.A. 13:1E-9f, any

person who violates an administrative order issued pursuant to N.J.S.A. 13:1E-9c, or a court order issued pursuant to N.J.S.A. 13:1E-9d, or who fails to pay a civil administrative penalty in full after it is due shall be subject upon order of a court to a civil penalty not to exceed $50,000.00 per day of such violation and each day's continuance of the violation shall constitute a separate violation.

15) Except as provided above in the Notice of a Right to a Hearing Section, this Notice of Civil Administrative Penalty Assessment shall be effective upon receipt.

Ronald T. Corcory
Acting Assistant Director - Enforcement
Division of Hazardous Waste Management

F04:FOC30:df

REFERENCE NO. 36

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WASTE MANAGEMENT

32 E. Hanover St., CN 027, Trenton, N.J. 08625

JACK STANTON
DIRECTOR

LINO F. PEREIRA
DEPUTY DIRECTOR

L.A. Dreyfus Company
Robert Devansky
P.O. Box 500
South Plainfield, N.J. 07080

RE: NOTICE OF VIOLATION
FAILURE TO SUBMIT ANNUAL REPORT

Dear Mr. Devancky:

As a result of the infomation included in your company's RCRA Part A submittal to the USEPA, Region II, your hazardous waste activities were classified as a TSD (Treatment, Storage or Disposal) facility status. Pursuant to the provisions of the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1, et seq., the Department of Environmental Protection has determined by examination of our files that you failed to submit a TSD Facility Annual Report by March 1, 1982. The requirements of this report are given on the enclosed sheet (along with instructions on how to be delisted from TSD status). Please note that this report is different and separate from the Generator's Report referred to in N.J.A.C. 7:26-7.4(g).

NOW, THEREFORE, YOU ARE HEREBY NOTIFIED that your facility shall submit the required annual report within fifteen (15) days of receipt of this Notice to: Frank Coolick, Chief, Bureau of Hazardous Waste Engineering, 32 East Hanover Street, Trenton, New Jersey 08625.

BE ON NOTICE that the Solid Waste Management Act establishes penalties of up to $25,000 per day for violation of the Department's hazardous waste management regulations. Your failure to correct the above violation, or any future violation, may result in a penalty action by this Department. Failure to submit the required report by the specified date will result in daily fines as follows:

i.	During the first week after the deadline:	$100/day
ii.	During the second week after the deadline:	$200/day
iii.	During the third week after the deadline:	$500/day
iv.	During the fourth week after the deadline and subsequently: a maximum of	$25,000/day

If you have any questions regarding this Notice, please call the Bureau of Hazardous Waste Engineering at (609) 292-9880.

DATE: JUL 10 1983

David J. Shotwell, Chief
Bureau of Compliance and Eforcement

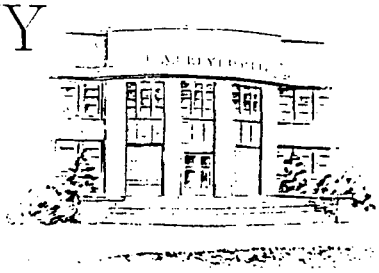
DJS:rh
Enclosure

New Jersey Is An Equal Opportunity Employer

REFERENCE NO. 37

L. A. DREYFUS COMPANY

MAIL ADDRESS
P. O. BOX 500, SOUTH PLAINFIELD, N. J.
07080 U.S.A.
TELEPHONE: AREA CODE 201 549-1600



PLANT: 3775 PARK AVE., EDISON N J.
CABLE: "LADCOMP-EDISON (NJERT"
TWX: 710-998-0548

March 2, 1983

Mr. Frank Coolick, Chief
Bureau of Hazardous Waste Engineering
32 East Hanover Street
Trenton, NJ 08625

Dear Sir:

By way of this cover letter, I am including some information requested in your letter of February 16, 1982 and received February 23, 1983.

Please note the enclosed letter dated December 7, 1982 requesting that we be delisted as a TSD facility. Our few large shipments of 1982 took almost three years to accumulate. As a food manufacturing plant we have little occasion to use toxic materials. The four major categories listed in our report are materials hazardous unto themselves and have as contaminants only FDA approved, food grade materials. In this light, we use the manufacturer's safety data sheets for a basic analysis and test only for flash points on EPA ignitables. The waste streams vary very little from day to day or year to year. The most varying is the stream labelled Waste Solvents NOS (flammable) as this contains waste laboratory solvents (all DOT flammable) and is collected once a week in one-gallon safety cans. All entries are inventoried (see enclosed list) and in this way detailed data are available if needed.

Also enclosed are copies of our inventory and inspection lists. We had no occasion to implement our contingency plan and we had no manifests rejected at disposal facilities to which we shipped.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties under N.J.S.A. 7:1E-1 et seq. for submitting false information, including the possibility of fine and imprisonment.

I hope the slight delay in submitting this report has not unduly inconvenienced you.

Sincerely,

Chester A. Czaplicki
Production Manager

CAC:mdes

Enclosures

NJDEP ANNUAL REPORT (TSD FACILITY)

JANUARY 1, 1982 - DECEMBER 31, 1982

EPA #NJD 002150993
L. A. Dreyfus Company
3775 Park Avenue
Edison, NJ 08820

Mailing Address
P. O. Box 500
South Plainfield
NJ, 07080

STORAGE ONLY

Analyses are conducted for flash points.

Manufacturer's specification sheets provide appropriate data and contaminants are innocuous and non-hazardous food-grade materials.

Mixed laboratory solvents are inventoried quantitatively.

Our facility delisted as a TSD as of December, 1982 due to small quantity of generation and no longer storing for more than 90 days.

All waste is generated on site - no manifests received.

All storage containers are 55-gallon steel drums.

Closure estimate for 1982 - $5,000.

MATERIALS ENTERING STORAGE	QUANTITY	EPA #
Waste Perchloroethylene	8	Fool
Waste Solvent Nos. (combustible)	5	D002
Waste Solvent Nos. (flammable)	3	D002
Waste Oil (non-PCB bearing)	4	X726

MATERIALS SHIPPED FROM STORAGE	QUANTITY	DATE & MANIFEST NO.	
Waste Perchloroethylene	28	1/4/82	NJ 0014653
Waste Perchloroethylene	8	12/16/82	NJ 0135920

Both to: Chemical Waste Management, Inc.
Highway 17 Mile Mark 163
Emelle, Alabama 35459 EPA ID #ALT000622464

Waste Solvent NOS (Combustible)	27	8/30/82	NJ 0078664

To: Keystone Portland Cement Co.
R.D. #3 Route 512
Bath, PA, 18014 EPA ID #PAD002389559

Waste Solvent NOS (Flammable)	7	8/30/82	NJ 0078664

To: Keystone Portland Cement Co.
R.D. #3 Route 512
Bath, PA 18014 EPA ID #PAD002389559

Waste Solvent NOS (Flammable)	2	12/21/82	NJ 0078665

To: Alchemtron Inc.
7415 Bessemer Avenue
Cleveland, Ohio 44127 EPA ID #0HT400011847

Waste Oil (Non-PCB Bearing)	10	11/16/82	NJ 0014654

To: L&L Oil
740 Lloyd Road
Matawan, NJ 07747 EPA ID #NJD011427895

REFERENCE NO. 38

2534-F5

[redacted]

5. DATE COMPLETED July 25, 1963 DRILLER Artesian Well & Equipment Co.

6. DIAMETER: Top 12 inches Bottom 12 inches TOTAL DEPTH 405 Feet

7. CASING: Type Steel Diameter 20 x 12" inches Length 72' 6" Feet

8. SCREEN: Type _____ Size of Opening ___ Diameter _____ inches Length _____ Feet

Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____

Tail piece: Diameter _____ inches Length _____ Feet

7. WELL FLOWS NATURALLY _____ Gallons per Minute at _____ Feet above surface

Water rises to _____ Feet above surface

8. RECORD OF TEST: Date May 21, 1963 Yield 450 Gallons per minute

Static water level before pumping 0' Feet below surface

Pumping level 141 feet below surface after 24 houre pumping

Drawdown 141 Feet Specific Capacity _____ Gals. per min. per ft. of drawdown

How Pumped Deep Well Turbine How measured Orifice

Observed effect on nearby wells _____

9. PERMANENT PUMPING EQUIPMENT:

Type _____ Mfrs. Name _____

Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____

Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet

Depth of Air Line in well ____ Feet Type of Meter on Pump _____ Size ___ inches

10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily

11. QUALITY OF WATER _____ Sample: Yes ____ No. ____

Taste _____ Oder _____ Color _____ Temp. _____ °F

12. LOG See reverse side. Are samples available? _____

(Give details on back of sheet or on seperate sheet. If electric log was made, please furnish copy)

13. SOURCE OF DATA ARTESIAN WELL & EQUIPMENT CO., INC.

14. DATA OBTAINED BY ARTESIAN WELL & EQUIPMENT CO., INC. Date July 25, 1963

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements etc.)

[redacted]

0 -	3'	Crushed stone fill.
3 -	3'	Top soil.
3 -	6'	Yellowish gray sandy clay.
6 -	13'	Brownish red hard clay, some stones.
13 -	45'	Reddish brown sticky clay.
45 -	50'	Reddish brown hardpan with a little sand layers.
50 -	60'	Soft brown shale and clay.
60 -	80'	Brown shale with some clay.
80 -	120'	Brown shale, some hard spots and some clay seams.
120 -	126'	Brown shale, harder.
126 -	148'	Brown shale with clay seams and some hard spots.
148 -	163'	Brown shale, harder with clay seams.
163 -	406'	Brown shale with clay seams, medium hard.

NOTE: Due to quality of water, this location has been abandoned , and the well permanently sealed.

REFERENCE NO. 39

REPORT
PHASE I
SITE GROUNDWATER PROTECTION PLAN
FOR THE CHEVRON CHEMICAL COMPANY FACILITIES
AT SOUTH PLAINFIELD, NEW JERSEY

JOB NO. 03818-049-10
May 1980

Dames & Moore

CRANFORD, NEW JERSEY

5 COMMERCE DRIVE · CRANFORD, NEW JERSEY 07016 · (201) 272-8300
CABLE: DAMEMORE TWX: 710-996-5802

May 27, 1980

Chevron Chemical Company
575 Market Street
San Francisco, California 94105

Attention: Mr. H. Schuyten

Re: Report: Phase I
Site Groundwater Protection
Plan for the Chevron Chemical Company
Facilities at South Plainfield, New Jersey

Gentlemen:

We herewith submit 5 copies of our report, "Phase I, Site Groundwater Protection Plan for the Chevron Chemical Company Facilities at South Plainfield, New Jersey."

We have enjoyed working with you on this assignment and should you have any questions or comments, please call.

Very truly yours,

DAMES & MOORE

Bernard Archer

Bernard Archer
Partner

J. G. McWhorter

J. G. McWhorter
Sr. Geologist

JGM/rar

FOR THE CHEVRON CHEMICAL COMPANY FACILITIES

AT SOUTH PLAINFIELD, NEW JERSEY

1.0 INTRODUCTION

1.1 GENERAL

This report provides the results of Dames & Moore's Phase I investigation of the general hydrogeologic conditions at Chevron Chemical Company's ORTHO facility at South Plainfield, New Jersey. The objective of the program is the gaining of an understanding of the basic ground-water system beneath and around the Chevron Chemical facility to properly assess:

1) [redacted]
2) [redacted]
3) [redacted]

The survey included a literature review of available ground-water and geologic information, pertinent site documents, regulatory requirements, and an evaluation of ground-water quality and regime. This study also provides recommendations for the location of test/permanent monitoring wells, identification of the sources of possible potential contamination of ground-water aquifers, suggestions for additional exploration to obtain more specific site information and documentation of the Phase I activities.

3.1 REGIONAL HYDROGEOLOGY

3.1.1 Regional Geology

The oldest known rock strata in the region is the Wissahickon Formation of Cambro-Ordovican age which is located generally in the southern third of Middlesex County. The Wissahickon consists of schist and gneiss of intermediate composition. It is not exposed at the surface in this area and is known only from borings and wells which have penetrated into this unit.

Approximately 200 million years ago duing the Triassic Period, the Brunswick Formation of the Newark Group was deposited in a down faulted basin called the Newark Basin. These non-marine red-brown shales with interbedded siltstones and occasional layers of sandstone trend generally to the northeast and dip 9° to 12° to the northwest. Several igneous bodies in the form of basalt flows are untercalated within the Newark Group, and form the Watchung Mountains to the north of the site.

The Brunswick Formation is overlain by glacial deposits of Pleistocene age (approximately 10,000 years old). These sediments are composed of varying amounts of clays, silts, sands, and cobbles and were deposited by the last (Wisconsin) of four huge continental ice sheets. The southern limit of advance by this ice sheet is represented by a terminal moraine which is located roughly one mile east of the site and along a curved line from Plainfield to Metuchen and the mouth of the Raritan River at Perth Amboy. North of this moraine is a till plain composed of unsorted material ranging from clay to boulders, directly deposited by the ice sheet as it melted and retreated northward. Southwest of the terminal moraine is an approximately 16 square mile area of glaciofluvial sediments (stratified drift) called an outwash plain. These sediments were deposited by waters from the melting glacier and are generally composed of layers of sand and gravel interbedded with silty and clayey layers. [redacted]

outwash plain directly underlies the Chevron site and is located approximately between the towns of Metuchen, Plainfield, and East Bound Brook. Finally, these sediments are overlain occasionally by Recent Alluvium, generally present in river valleys and swamps. Based on well logs obtained from the New Jersey Bureau of Geology (Table 1), the thickness of these sediments and thus the depth to bedrock (Brunswick Shale), varies from zero to about 105 feet within about 1 1/2 to 2 miles of the Chevron site.

3.1.2 Regional Ground-Water Regime

Ground-water is present in varying amounts in all of the consolidated and unconsolidated deposits of this region. Because of its large areal extent, the Brunswick Formation is one of the most important aquifers in Middlesex County. The water is generally present in secondary openings (fractures and joints). Thus, the effective permeability varies greatly in the Brunswick Formation depending upon lithology and fracture density. Yields from wells tapping this Formation in the general area about the site range from 2 to 660 gallons per minute (gpm) with an average of 140 gpm. The specific capacities of these wells range from 0.1 to 25 gpm per foot of drawdown with an average of 3.6 gpm per foot of drawdown. The depth of wells in the Brunswick range from 60 to 1,566 feet and average 213 feet.

In most locations, the overlying glacial sediments and the bedrock (Brunswick Formation) are in hydraulic communication. Recharge to the bedrock is generally through infiltration of precipitation directly through the surficial sediments. The surficial (glacial) sediments, in general, have an inadequate thickness and cover too small an area to be an important water source alone. However, they do hold water which percolates into the underlying bedrock. Thus, the more permeable the surficial sediments, the more recharge to the Brunswick Formation. Of the three types of glacial sediments described in Section 3.1.1, the outwash type is generally the most permeable (less silt and clay) and thus provides the best recharge to bedrock. Al-

though the regional flow of groundwater in this area is generally to the north and west, it could be affected locally by interference from nearby pumping wells.

The water-bearing characteristics of the glacial deposits and the bedrock in the area surrounding the site differ widely. Much of this difference is due to the type of openings in which the water is stored — the primary openings of the glacial deposits consisting of intergranular pore spaces at the time of deposition; or, secondary openings of the bedrock developed along joints, bedding planes, and faults subsequent to deposition and lithification.

The quantity of water that may be stored in a deposit depends on the porosity, or the percentage of the total volume of the deposit that is occupied by pores and other openings.

The rate at which water moves through deposits, and thus the readiness with which it is available for withdrawal from wells, is controlled by the permeability of the material. Permeability, which is related to the size and degree of interconnection of pore spaces and other openings, is normally very low in bedrock and till. The permeability of glacial outwash deposits is generally much higher. In faulted and fractured bedrock, localized zones of high permeability can be present.

3.2 HYDROGEOLOGY OF THE SOUTH PLAINFIELD, N.J., CHEVRON FACILITY

3.2.1 General

In this section, we present the site specific hydrogeologic information for the South Plainfield, New Jersey, Chevron Facility. We will describe the ground-water flow regime in terms of zones of recharge, discharge and flow paths; generally evaluate the relationships between the soil and rock aquifers; as well as provide the data on flow velocities.

3.2.2 Site Topography

The South Plainfield, New Jersey, Chevron Facility is situated in the wide, shallow valley of the Bound Brook near its head waters. The average Site surface elevation is about 70 feet above mean sea level (MSL) with almost no variation. To the east and about one mile from the Site, the topography rises to an elevation of about 160 to 180 feet, representative at the terminal moraine. The topography to the west of the Site is much flatter, rising to an elevation of only about 80 to 100 feet.

The uppermost reaches of Bound Brook flow northwest and then west from a swampy area just southwest of the Chevron Site (Figure 1). Several small open, unlined drainage ditches flow eventually southeast off Chevron's property and then into a small west-flowing tributary of Bound Brook downstream of the aforementioned swampy area (Figure 5).

3.2.3 Bedrock Geology

The entire Site is underlain by the Brunswick Formation at depths of about 47 feet on the southeastern portion of the fenced property to 55 feet below ground surface on the northwestern end of the property. The bedrock is indicated on the generalized geologic cross sections, Figures 2 and 3, and consists of a red-brown fractured shale as cored in boring/well DSW-1 (the only boring cored). Bedrock was encountered in three borings/wells across the Site: DSW-1, DSW-2, and DSW-3. Since a unit of about 24 to 30 feet of relatively impermeable clay was encountered above bedrock, further study of bedrock was deemed unnecessary at this time.

3.2.4 Soil (Glacial) Geology

Based on the three exploratory bore holes that penetrated to bedrock (DSW-1, DSW-2, and DSW-3), the surficial (soil) deposits range from about 47 feet thick at Well DSW-2 to about 55 feet thick at DSW-1, and are of glaciofluvial outwash or lacustrine origin. This relationship is shown in the generalized geological cross section A-A (Figure 2). The location of this cross section and cross section B-B (Figure 3) are indicated on Figure 1.

caused by melting of a stagnant block of ice trapped in the surficial sediments. Within this depression a swamp formed leaving behind a deposit of [redacted] respectively.

The youngest unconsolidated unit on-site is a red-brown silty sand which overlies the gray to yellow brown sandy silt/silty sand. In the east central portion of the Site between DSW-3 and DSW-4 this unit grades to a facies with a little to some gravel. A similar but thinner lens is present at DSW-2. Occasionally a thin layer of fill covers this unit, especially in the vicinity of parking areas and the three buried dump sites.

As can be seen from the two geological cross sections (Figures 2 and 3) and the boring logs (Figures 4A to 4E), the surficial deposits above bedrock consist of a complex series of lenses of various amounts of sand, silt, clay, and gravel. This is normal for deposits of combined glaciofluvial and lacustrine origin.

3.2.5 Aquifer Hydrology

3.2.5.1 General Aquifer Description

The earlier parts of Section 3.0 have set the geologic framework for the South Plainfield-Middlesex County area in general, and the South Plainfield Chevron Facility in particular. The general lithologic character of both bedrock and soil as well as vertical and lateral variations in distribution have been described. Utilizing this geologic framework, we will, in this section, describe the aquifers as well as estimate ground-water flow velocities and directions of flow.

At the South Plainfield, New Jersey, Chevron Chemical facility, ground-water was encountered in all of the monitoring wells. All of the wells have been installed in the near surface soil aquifer. The original plan of installing monitoring wells in both the soil and rock aquifers was altered when drilling confirmed the presence of a thick (24 to 30 feet) relatively impermeable silty clay layer above the

shale bedrock. Further study of the rock aquifer was deemed unnecessary at this time.

One soil aquifer is present beneath the Site, with its base at the top of the thick red clay layer (Figures 2 and 3). Although clay layers (lenses) were encountered within the aquifer in all borings/wells except near the northwestern portion of the property (DSW-3, SSW-3, and DSW-7), these layers appear to not be continuous enough under the site to divide and thus create more than one main soil aquifer (Figures 2 and 3). A slight difference in water level (Table 2) is found between shallow and deep wells of the following pairs: DSW-1 and SSW-1, DSW-2 and SSW-2, and DSW-5 and SSW-5, where one of these clay layers is present. This will be discussed later in Section 3.2.5.3. The general soil aquifer characteristics are presented as Table 3.

Since the rock aquifer was not studied, its specific characteristics are not known. Although the rock aquifer is apparently separated locally by a thick silty clay layer of glacial origin (see Section 3.2.4) under the lateral site, the extent of this clay layer is not known. It was considered prudent not to extend the exploration program into the shale bedrock in order to minimize the potential of inducing any contaminants into the Brunswick by the drilling procedures being used. Geologic logs obtained from the New Jersey Bureau of Geology for many of the existing wells in the vicinity (Table 1 and Figure 5) indicate the presence of varying amounts of clay above the shale bedrock. However, some logs indicated no clay, for example wells 6 (Middlesex Water Company), 13, 15, 20, 21, 22, and 25 which are located on Figure 5. Well No. 17, located directly across from the site, derives its water from the Brunswick formation since the volume of water normally required for public wells is greater than that available from the thin veneer of surficial sediments. Also, an excavation on a residential property less than 4,000 feet due west of the Site exposed highly fractured shale within about 1 to 2 feet of ground surface. Thus, within a relatively short distance from the Site the soil and rock aquifers may locally be in hydraulic communication.

3.2.5.2 Transmissibility and Permeability

The surficial soil materials are all of glacial outwash (glac... as discussed previously in Section 3.2.4. These materials are typ... deposits, composed of lenses clays to sands and gravels with varying ... and clay. Because of this heterogeneity, the transmissibility and p... considerably over relatively short distances with lower rates as the ... and/or clay increases. For example, the glacial materials penetrate... indicate an average transmissibility of [redacted]; ... and an [redacted]; materials in Well DSW-6 are more silty and/or clayey and, thus, inc... bility of only 190 gpd/ft and a permeability of 6 ft/day. See Table ... the seven wells tested.

In general, the glacial materials near Wells DSW-1 ar... highest average transmissibility (about 59,500 gpd/ft and 24,500 ... and permeability (approximately 635 ft/day and 530 ft/day, respec... materials near the remainder of the wells tested have much lower ... bilities and permeabilities ranging from a high near Well DSW-4 ... gpd/ft and 85 ft/day, respectively) to a low near Well DSW-6 (190 ... respectively). Both DSW-4 and DSW-5 are each near one of th... sites.

3.2.5.3 Water Level and Direction of Flow

The ground-water levels and the most probable genera... water flow in the soil aquifer at the South Plainfield, New Jers... facility are provided in Table 2 and Figure 7, respectively. Th... the water levels in the shallow and deep monitoring well pairs ... an intermediate clay lense separates a pair of wells (DSW-1 ...

and SSW-2), the water level in the shallow well is generally 0.2 to 0.4 foot higher than the level in the nearby deep well, suggesting a very localized perched water condition. The difference in water levels between DSW-5 and SSW-5 is somewhat more pronounced and changable. The water level in Well SSW-5 ranges from about 0.4 to 2.0 feet higher than DSW-5. This also indicates a localized perched water condition. However, the larger range is probably due to the varying amounts of standing water and marshy conditions near these two wells that may selectively recharge DSW-5. This water is a result of the frequent rain that occurred during the Spring and has now evaporated or run off. [redacted] During the pump test on Well DSW-5, the drawdown in SSW-5 was very quick and more pronounced than for the other three pairs of deep and shallow wells. This is expected because of the lack of an intermediate clay lense in the vicinity of these two wells. Also, the static water levels of DSW-5 and SSW-5 are generally at almost the same elevation.

The general direction of ground-water flow is based on water level measurements in the deep, DSW-series wells (See Figure 7). As can be seen from Figure 7 the direction of ground-water flow is fairly simple. [redacted]

The typical hydraulic gradient southwest across the site to the northwest trending trough is approximately 0.0036 or about 19.2 feet per mile; while the typical hydraulic gradient to the northwest along the axis of the trough is approximately 0.0014 or about 7.5 feet per mile.

REFERENCE NO. 40

REPORT
PHASE II STUDY
CHEVRON ORTHO FACILITY
SOUTH PLAINFIELD, N.J.

JOB NO. 3818-062-10
JANUARY 1982

Dames & Moore

CRANFORD, NEW JERSEY

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January 6, 1981

Chevron Chemical Company
Ortho Division
P.O. Box 3744
San Francisco, California 94119

Attention: Mr. D.F. Searle

Gentlemen:

We are pleased to forward 10 copies of our report "Phase II Study, Chevron Ortho Facility, South Plainfield, N.J." for your use and consideration. The scope of work for this investigation was established in our proposal to you dated January 30, 1981.

Based on your letter of September 23, 1981, we have incorporated those corrections and additions which you recommended after reviewing a draft copy of our report.

Dames & Moore is appreciative of your continued expression of confidence in our firm and we look forward to a continued association with Chevron in the future.

Very truly yours,

DAMES & MOORE

J.G. McWhorter
Associate/Senior Geologist

JGM:sh

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PHASE II STUDY
CHEVRON ORTHO FACILITY
SOUTH PLAINFIELD, NEW JERSEY

1.0 INTRODUCTION

This report presents the results of an investigative program at the Chevron Chemical Company Ortho facility at South Plainfield, New Jersey. The program was an outgrowth of several recommendations contained in the Dames & Moore report, "Phase I, Site Ground Water Protection Plan for the Chevron Chemical Company Facilities at South Plainfield, New Jersey" dated May 1980.

1.1 PURPOSE

As described in our referenced Phase I report, Section 5.2, Recommendations, the purpose of the recommendations was to focus all available information on further identifying the extent of any contamination in the soils above the water table. Specifically, Recommendation No. 3 suggested additional shallow subsurface exploration in the vicinity of the suspected buried disposal sites. In Dames & Moore's proposal to Chevron Chemical dated January 30, 1981, a geophysical method (ground penetrating radar) was recommended for this task rather than the originally proposed method of drilling and sampling.

Another purpose of the Phase II program was to conduct a second round of water sampling and analyses of the monitoring wells on the Chevron Site, focusing on the volatile organics reported by the New Jersey Department of Environmental Protection (NJDEP) from their analysis conducted in June, 1980.

1.2 SCOPE OF WORK

As set out in our proposal to Chevron, dated January 30, 1981, the scope of work for the proposed program consisted of:

1) Geophysical Survey — utilizing a ground penetrating radar system, t survey was to delineate the approximate boundaries of three report buried disposal sites on the Chevron property;

2) Water Sampling and Water Quality Analyses — As a result of the NJDE water quality analysis of June 1980, in which they reported concentratio of certain volatile organics in water samples taken from several of t monitoring wells on the Chevron site, a water quality analysis program w prepared to address this concern. In addition, a diminished analys protocol on pesticides from those tested for in our May 1980, Phase report and June 16, 1980 analysis was also prepared;

3) Report Preparation — a report documenting the results of the above wor items would be prepared. Included in the report would be an interpretatic of the results and synthesis with data previously collected in order present an updated view of the subsurface geohydrological conditions the Chevron site.

2.0 WATER SAMPLING AND WATER QUALITY ANALYSES

2.1 INTRODUCTION

The water sampling and analysis program was designed to identify whethe certain volatile organics were present in the plant area subsurface and if so, to defin the extent of distribution. Based on their analysis results of the June 16, 1980 wate sampling, the NJDEP requested that additional water samples be obtained in concer with them and analyzed from monitoring wells DSW-4 through DSW-8. The analys protocol for volatile organics was based on the NJDEP internal memorandum c February 13, 1980, and that for pesticides was based on a reduced number c compounds that had been detected in previous water analysis. The results of the wate quality testing are contained in Appendix B to this report.

2.2 SAMPLING PROCEDURES

Prior to water sampling with the NJDEP, water levels (see Table 1) wer measured and the wells were purged. with several volumes of water removed fro

TABLE 1

GROUND WATER LEVELS

Well No.	Elevation of Top of Casing (ft)	Ground Water Elevation (ft Above MSL) 6/16/80	3/17/81
DSW-1	72.83	66.64	67.17
SSW-1	72.93	66.65	67.76
DSW-2	73.04	67.58	68.23
SSW-2	72.59	67.17	68.62
DSW-3	73.40	67.69	68.47
SSW-3	72.96	67.65	68.43
DSW-4	73.06	66.98	67.41
DSW-5	72.13	66.55	67.90
SSW-5	72.14	(*)	68.71
DSW-6	71.99	66.20	68.04
DSW-7	73.68	67.70	68.38
DSW-8	71.36	65.78	66.94

*No water in bottom of casing